DOCUMENT RESUME

ED 430 167 CG 029 228

AUTHOR Brown, Randall Anthony
TITLE The Influence of Extracurricular Activity Participation upon Youth Problem Behavior: School Connection as a Mediator.
PUB DATE 1999-06-00
NOTE 177p.; Doctoral dissertation, University of California, Davis.
PUB TYPE Dissertations/Theses - Doctoral Dissertations (041)
EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *Extracurricular Activities; *Participation; *Prosocial Behavior; Secondary Education; Secondary School Students; Student Development; *Youth Problems
IDENTIFIERS *Affiliative Behavior; Mediation Techniques

ABSTRACT

How participation in extracurricular activity participation (EAP) encourages prosocial behavior is investigated. A sense of connection to prosocial entities is understood to influence youth behavior. This study tests the hypothesis that the impact of EAP is mediated by a youth's sense of connection to the school. Using a diverse sample of secondary students from two school districts (N=1,756), the following research questions were investigated: (1) What constitutes school connection construct? (2) Is extracurricular activity participation associated with a decreased likelihood of youth problem behavior? (3) Is extracurricular activity participation associated with increased sense of school connection? (4) Is school connection associated with a decreased likelihood of youth problem behavior? (5) Does school connection mediate the relationship between extracurricular activity participation and youth problem behaviors? A mediation model is proposed, and youth problem behaviors including class cutting and substance use are measured. Multiple regression analysis did not fully support the school connection mediation model; however, analyses revealed that both EAP and school connection are significantly related to a decreased likelihood of youth problem behavior. The complex developmental process of school connection is discussed in relation to changes to the school environment, which may be beneficial in providing programs for youth. Ten appendixes include charts summarizing EAP and connection research, survey instrument, selection instructions, consent form, administration protocol, sample script, two tables depicting matrix of variables and results of analysis, and discussion of background variables results. (Contains 124 references.) (Author/EMK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

POOR PRINT QUALITY
Pgs 162 - 170

CG

THE INFLUENCE OF EXTRACURRICULAR ACTIVITY PARTICIPATION UPON YOUTH PROBLEM BEHAVIOR: SCHOOL CONNECTION AS A MEDIATOR.

ED 430 167

By

RANDALL ANTHONY BROWN
B.S. (San Diego State University)
M.S. (University of California, Davis)

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

HUMAN DEVELOPMENT

in the

OFFICE OF GRADUATE STUDIES

of the

UNIVERSITY OF CALIFORNIA, DAVIS

1999

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. BROWN

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CG029228

Table of Contents

Dedication.....iv

Acknowledgments.....v

List of Figures.....vi

List of Table.....vii

Abstract.....ix

Chapter

I. Introduction

Theoretical Background.....3

Extracurricular Activity Participation.....8

School Connection Mediation Model.....10

Developmental Timing.....14

Research Questions.....16

II. Literature Review

Extracurricular Activity Participation.....17

EAP and Problem Behaviors.....17

The Process of EAP Impact.....22

Summary.....26

Connection.....26

Alienation.....28

Social Control.....31

School Belonging.....34

Summary.....37

Connection and Problem Behaviors.....37

Summary.....42

III. Method

Definitions.....45

Extracurricular Activity.....45

Problem Behaviors.....46

School Connection.....46

Procedure.....49

Participants.....54

Instrument.....56

Extracurricular Activity.....58

School Connection.....59

Problem Behaviors.....61

Background Variables.....64

Analysis Plan.....65

IV. Results
School Connection.....68
EAP and Problem Behaviors.....70
Background Variables.....72
Comparison of EAP Categories.....73
EAP and School Connection.....78
Background Variables.....79
Comparison of EAP Categories.....80
School Connection and Problem Behaviors.....84
Comparison of School Connection Factors86
EAP and Problem Behaviors Controlling for School Connection.....87

V. Discussion
Limitations.....90
Extracurricular Activity Participation.....91
School Connection.....96
School Connection Mediation Model.....102
Implications.....104

References.....111

Appendix A: Chart Summarizing EAP Research.....123
Appendix B: Chart Summarizing Connection Research....132
Appendix C: Survey Instrument.....137
Appendix D: School Administrator Classroom Selection Instructions.....141
Appendix E: Participant and Parent Consent Form.....142
Appendix F: Administration Protocol.....146
Appendix G: Sample Focus Group Script.....147
Appendix H: Correlation Matrix of Variables.....148
Appendix I: Results of Post Hoc Analysis of School Belonging and Problem Behaviors.....149
Appendix J: Discussions of Background Variables Results.....150

Dedication

I would like to dedicate this paper to my family and friends who have supported and inspired me throughout this process. Out of all the wonderful people in my life, I would like to dedicate this achievement to two special women: My mother, Bonnie, without whom I would not be anywhere near here; and my wonderful wife, Karminder, who without her love this milestone would mean nothing. I am fortunate to have an extraordinary group of friends, family, and colleagues, but without my mother and wife I could not have achieved this end.

Life without love is a but a voice in the dark.

Acknowledgements

I would like to acknowledge a large group of individuals who have made completion of this project possible. Firstly, I would like to thank my friends and family for their ongoing support. Also, I would like to acknowledge the contribution of my dissertation committee of Xioajia Ge, Ph.D., Laurel Dean, Ph.D., and Keith Barton, Ph.D. Other university faculty who have also been important in this effort are Larry Harper, Ph.D., Carol Rodning, Ph.D., and Rose Kraft Ph.D.. I would also like to acknowledge the staff of the Human and Community Development Department.

I would also like to acknowledge Geoffery Leigh, Ph.D. for his editing contributions.

The data for this study grew out of a long and gratifying relationship with two school district administrators, Ken Duckert and Diana DeGracia. Lastly, I would like to thank the students who participated in this study, for all of this is ultimately for them.

List of Figures

Figure 1: *School connection mediation model* 11
Figure 2: *Model for testing mediation effects*.....67

List of Tables

Table 1: *Participant data*.....55
Table 2: *Frequency of class cutting*.....62
Table 3: *Frequencies of substance use item #1*.....62
Table 4: *Frequencies of substance use item #2*.....63
Table 5. *Frequencies of substance use item #3.* 63
Table 6. *Cronbach alpha' levels from the combination of substance use items*.....63
Table 7: *School connection factor-matrix*.....69
Table 8: *Results from multiple regression equations predicting problem behaviors from TEAP after controlling background variables*.....72
Table 9: *Results from multiple regression equations predicting problem behaviors from Sports participation after controlling background variables*.....75
Table 10: *Results from multiple regression equations predicting problem behaviors from Outside of School participation after controlling background variables*.....76
Table 11: *Results from multiple regression equations predicting problem behaviors from Inside of School participation after controlling background variables*.....77
Table 12: *Results from multiple regression equations predicting problem behaviors from Fine Arts participation after controlling background variables*.....78
Table 13: *Results from a multiple regression equation predicting School Connection from TEAP after controlling background variables*.....79
Table 14: *Results from a multiple regression equation predicting School Connection from Sports participation after controlling background variables*.....81
Table 15: *Results from a multiple regression equation predicting School Connection from Outside of School participation after controlling background variables*.....82

Table 16: *Results from a multiple regression equation predicting School Connection from Inside of School participation after controlling background variables*.....83
Table 17: *Results from a multiple regression equation predicting School Connection from Fine Arts participation after controlling background variables*.....84
Table 18: *Results from multiple regression equations predicting problem behaviors from School Connection after controlling background variables*.....85
Table 19: *Results from multiple regression equations predicting problem behaviors from School Connection Factors after controlling background variables*.....87
Table 20: *Results from multiple regression equations predicting problem behaviors from TEAP after controlling school connection and background variables*.....89

Randall Anthony Brown
June, 1999
Human Development

The Influence of Extracurricular Activity Participation Upon Youth Problem Behavior: School Connection as a Mediator

Abstract

Extracurricular activity participation (EAP) has long been purported to be an important source of prosocial influence in the lives of youth. The empirical literature, however, is largely devoid of investigations into how participation encourages prosocial behavior.

Concurrently, multiple fields have converged on the construct of connection. A sense of connection to prosocial entities has been argued to have an important influence upon youth behavior. This study tests the hypothesis that the impact of EAP is mediated by a youth's sense of connection to school.

Using a diverse sample of secondary students from two school districts (n=1,756), the following research questions were investigated: 1) What constitutes the *school connection* construct? 2) Is extracurricular activity participation associated with a decreased likelihood of youth problem behavior? 3) Is extracurricular activity

participation associated with an increased sense of *school connection*? 4) Is *school connection* associated with a decreased likelihood of youth problem behavior? 5) Does *school connection* mediate the relationship between extracurricular activity participation and youth problem behaviors?

The results from this study did not fully support the proposed *school connection* mediation model. Nevertheless, the analyses revealed that both EAP and *school connection* were significantly related to a decreased likelihood of youth problem behavior. These results are discussed in greater detail and are used to inform the development and implementation of youth programming.

Chapter I.

Introduction

The substantial increases in youth problem behaviors* of the late 1980s and 1990s have brought youth issues to the forefront of public concern. For example, from 1983 to 1992 the estimated crimes committed by juveniles increased nearly 50 percent (National Center for Juvenile Justice, 1994). By the age of seventeen about 25 percent of American students have engaged in behaviors that are harmful to themselves or dangerous to others (using drugs, dropping out of school, getting pregnant, or taking part in an antisocial activity) (Carnegie Council on Adolescent Development, 1995). These alarming increases have inspired numerous responses in the form of prevention and intervention programs. Aside from having programs target individual problem behaviors, schools, school districts, and communities are searching for alternative means of preventing deviant behavior.

Those who work with youth often suggest that participation in extracurricular activities can be an

---

*Problem behaviors or deviant behaviors are defined in this study as ones that are deviant to the prosocial, adult-conventional norms, for example substance use, violence, truancy, etc.

important prosocial influence in the lives of developing youth. Research on Extracurricular Activity Participation (EAP) generally has supported this view (for review see Holland & Andre, 1987; or Steinberg, Cider, Kaczmarek, & Lazzavo, 1988). This research, however, is rife with methodological flaws such as limited sampling and inadequate definitions of participation (e.g., Spady, 1970 and Jenkins, 1996). Moreover, this literature largely has avoided questions regarding how participation in extracurricular activities positively influences the behavior of youth. Elucidation of the process whereby EAP discourages deviant behavior would be an important contribution to those who direct prevention efforts.

In this study, I argue that a youth's sense of connection to his/her school can be employed as an explanation of the relationship between EAP and deviant behavior. *Connection* is defined in this study as an individual's psychosocial understanding of his/her link to a social institution*. Several fields of study have concurrently argued that a sense of connection to a

* Although connection is a term that is not present in the original literature, most authors have conceptualized a continuum of social linkage (Newman, 1981). A summary of the separate theoretical treatments of connection will follow in Chapter II; in addition, a more elaborate definition of this construct as it is employed in this study will follow in Chapter III.

prosocial institution encourages prosocial youth behavior (Hirschi, 1969; Seeman, 1959; Goodenow, 1993a). Using a recently collected data set of secondary school students, I tested the hypothesis that the relationships between EAP and substance use and school attendance are mediated by *school connection*. The findings from this analysis will be discussed in terms of enhancing the effectiveness of youth programming in schools and communities.

Theoretical Background

Traditionally, those who study youth problem behavior have been guided by several theoretical orientations. *Strain theory* (Cohen, 1955; Cloward & Ohlin, 1960) contends that deviant youth behaviors result from a frustration in conventional pathways towards achievement. Youth who are frustrated by a lack of *opportunity* to achieve through conventional means are prone to pursue their goals in non-socially sanctioned ways. Cloward and Ohlin (1960) suggest that youth with a real or perceived lack of opportunity develop a sense of *anomie*, or alienation, regarding conventional society. Strain theory implies that the internal schema or *elements*, which motivate an individual's adherence to conventional norms, shift in an antisocial direction (Elliot Huizinga & Ageton, 1985). Strain

theorists, however, fail to elaborate on these internal elements. Its focus, rather, is upon the situation and circumstance which lead to this shift.

Control theory (Hirschi, 1969), in contrast, maintains that the internal elements of a social bond ultimately predict deviant youth behavior. Youth, Hirschi (1969) argues, are inherently attracted to delinquent behaviors. Social bonds and their respective elements, (*commitment*, *belief*, *attachment*, and *involvement*), essentially control or restrain youth in a prosocial direction. This perspective, however, omits a discussion of the *process* whereby these elements develop.

Social learning theory contends that behavior, whether prosocial or deviant, is learned and maintained through a system of rewards and punishments (Akers, 1977). Within a social context reinforcement and punishment contingencies determine whether an individual learns prosocial or deviant behavioral patterns. According to this perspective, association with individuals who have antisocial norms and values creates a social arena that reinforces deviant behavior and discourages prosocial behavior (Akers, 1977). This perspective generally avoids a discussion of factors which encourage initial and continued associations with deviant others; in addition, social learning theory does

not emphasize the effects of prosocial associations (Hawkins & Weis, 1985; Elliot et al., 1985).

Although these theories have their ardent proponents, contemporary scholars have sought to integrate these theories in order to provide a more complete narration of the development of a deviant behavior profile (Elliot et al., 1985; Kronhouser, 1978; Hawkins & Weis, 1985; Johnson, Marcos & Bahr, 1987). Hawkins & Weis' (1985) *social development theory*, in particular, has integrated these three theories of deviant behavior to explain social development. Furthermore, social development theory has been organized so as to provide a theoretical foundation for prevention efforts.

Approaches to confronting youth deviance have been generally divided into two categories, prevention and control. Simply put, *control* is a reaction to a deviant behavior once it has occurred, while *prevention* is an action that seeks to preclude a deviant behavior before it occurs (Lejins, 1967). To be effective, applied prevention approaches need to be designed to subvert the etiological forces which promote youth problem behaviors (Hawkins, Pastor, Bell, Morrison, 1980). In addition, prevention efforts need to consider these forces while recognizing

that they are embedded within the process of youth social development (Hawkins & Weis, 1985).

According to Hawkins and Weis (1985), as children develop an understanding of their role and orientation in the social realm, they are influenced by distinct yet inter-related *units* of socialization, (for example, family, school, or peers) (Hawkins & Weis, 1985; Fagan, 1990). A youth's experiences, as a part of these social units, greatly affect his/her *understanding* of his/her bond to the particular social unit. It is further argued that this understanding of the character and importance of a social bond guides an individual youth's social behavior (Weis & Hawkins, 1981). These authors assert that due to developmental shifts, the importance of school and peers in this social development process increases as children become adolescents (Hawkins & Weis, 1985; Berndt, 1979).

The authors of social development theory recognize that a lack of *opportunities* in a youth's environment can prevent the acquisition of conventional social bonds (Hawkins & Weis, 1985). As strain theory suggests, the real or perceived lack of opportunity encourages a sense of anomie, discouraging a sense of connection (Cloward & Ohlin, 1960; Hawkins & Weis, 1985). Hawkins and Weis (1985) contend that youth must have the opportunity to

interact in a participatory social setting with conventional others in order develop the *elements* of a conventional social bond (Hawkins & Weis, 1985). As with control theory (Hirschi, 1969), Hawkins and Weis (1985) suggest that the internalized elements of a social bond affect youth social behavior. Further, this sense of connection discourages associations with antisocial peer groups, an important setting for the learning of deviant behaviors (Hawkins & Weis, 1985; Akers, 1977). Hawkins and Weis (1985) suggest that prevention efforts should employ developmentally sound socialization opportunities which will effectively enhance the elements of a social bond.

In the study of school dropout by education researchers, a similar integrative interpretation of youth social development has emerged. Finn (1989) proposed a *participation-identification* theory, which synthesizes several theories to explain student dropout. Finn (1989) posits that active participation in various aspects of schooling promotes a greater identification with school, thus leading to a lesser likelihood of dropout. Once again, this theory suggests that as a result of participation a youth's sense of connection to the social institution (e.g. school) can be an important factor in a youth's adherence to prosocial norms.

Although originating from their respective traditions, social development theory and participation-identification theory converge on the premise that involvement in conventional activities should increase a youth's sense of connection thereby discouraging deviant behavior (Finn, 1989; Hawkins and Weis, 1985). An empirical examination of this thesis could lend much to the study of youth prevention efforts. One class of activities, which is readily available for testing and is also an important focus for prevention efforts, is *extracurricular activities*.

Extracurricular Activity Participation

Extracurricular activity participation (EAP) has long been espoused as an important part of youth development (e.g. Johnston & Faunee, 1952). Extracurricular activities range from sports activities to debate clubs. Their commonality is that they involve youth in a structured or semi-structured activity that is not focused on the regular academic curriculum. Extracurricular activity participation has been found to be positively associated with a wide range of variables (personal development, academic achievement, race relations, political and social participation, and non-deviant behavior, see review by

Holland & Andre, 1987). The most frequently asked question by researchers who have investigated this topic is "What is the impact of EAP?" In sum, these studies have found that youth participation in activities is associated with improved outcomes (Holland & Andre, 1987; Steinberg et al., 1988). This literature, however, has not considered the *process* whereby participation in an activity results in improved youth outcomes (Brown, 1988; Holland & Andre, 1988; Steinberg et al., 1988).

Aside from the theoretical importance of explaining the effect of participation, findings of this kind can provide useful information to those who design and implement prevention programming. Baron and Kenney (1986), in their discussion of mediators and moderators, argue that investigations of mediators can be effectively used to guide prevention efforts. By focusing on a mediator, one can better understand the *process* by which an activity has an impact (Holland & Andre, 1988; Dunkin & Bindle, 1974). A greater understanding of the process will allow those who design extracurricular activities to target factors which have been found to be predictive of positive outcomes.

Several practical suggestions have been offered to explain how EAP generates a positive impact. These suggestions, which have not been empirically examined

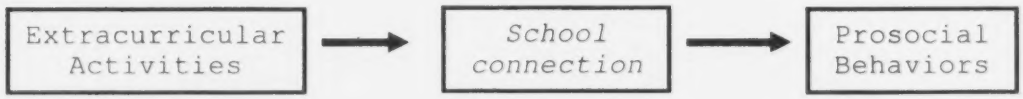
(Steinberg et al., 1988), have centered on activity-specific skills, for example: increased academic skills through academically related activities such as debate or journalism clubs (Miller, 1956); increased teamwork though participation in athletic activities (Alley, 1974); or increased leadership through participation in student government and/or athletic activities (Schafer & Armer, 1972). Although these skills might be important factors in enhancing youth development, many authors have argued that there is a more fundamental reason why students show improved outcomes as a result of EAP (Holland & Andre, 1987; Brown, 1988; Marsh, 1993). Researchers suggest that an explanation is needed which defines the underlying processes common to all extracurricular activities (Brown, 1988; Holland and Andre, 1987; Steinberg et al., 1988).

School Connection Mediation Model

Social development theory (Hawkins & Weis, 1985) and participation identification theory (Finn, 1989) both suggest that participation in extracurricular activities may contribute to a youth's sense of bonding with his/her school. These theories further suggest that this internalized sense of connection discourages deviant behavior. These theories can be employed to predict that

the impact of EAP is mediated by a youth's sense of connection to school (see conceptual model below, Figure 1). Participation in extracurricular activities exposes a youth to prosocial values, involves him/her in prosocial activities, and assists him/her in building prosocial relationships- all of which may increase a youth's sense of connection to school (Hawkins & Weis, 1985; Burbach, 1978; Nover, 1981; Fetro, 1987; Finn, 1989; Otto & Alwin, 1977). The increased sense of connection to school influences outcome behaviors like attendance and substance use (Goodenow, 1993b; Calabrese & Adams, 1990). In sum, the influence of EAP on positive youth development cannot be fully understood without an inclusion of *school connection*.

Figure 1. *A conceptual diagram of a mediator model for the impact of extracurricular activity participation.*



School connection is a construct that has emerged out of the consolidation of several theoretical traditions (Seeman, 1959; Goodenow, 1993a; Hirschi, 1969). These diverse theoretical orientations have come to similar

conclusions: the interplay between the environment and youth produce a degree of internally perceived connection. These respective theoretical orientations further agree that social connections are important influences upon prosocial behavior. These theories differ, however, in what they consider to be the elements of the phenomenon. In order to merge these divergent yet similar theoretical orientations, I have attempted to include both their commonalties and important aspects of their divergence. I have drawn from alienation literature to include both *power* and *commitment* (Seeman, 1959). *Power* is an individual's sense of control over a social institution, while *commitment* is an individual's understanding that the social institution is consistent with his/her own goals. Dworkin (1987), Finn (1989), and Hirschi (1969) have defined similar constructs. *Power* and *commitment* are important psychosocial concepts, but they do not complete a sense of connection. Social Control theory (Hirschi, 1969) also advances the need for the individual to have a *belief* that the social institution is a valid one. This construct has been omitted by other theoretical orientations. Lastly, Goodenow (1993a) focuses on the *belonging* one perceives to others in the school setting. This construct, while not the central focus, has been posited by other perspectives

as well (Seeman, 1959; Finn, 1989; Dworkin, 1987; Hirschi, 1969; Ryan et al ., 1990). These constructs, together, form a more comprehensive sense of connection. A more complete definition of this construct will follow in Chapter III.

A hypothetical (and ideal) practical example can be offered to illustrate the proposed mediation effects of the *school connection* construct. A youth who participates in student government can be utilized as an example of this process. Through this extracurricular activity participation, the student develops more relationships with other students and adults. Through participation, the student might also feel he/she has more say in his/her school environment and is more listened to by school-affiliated adults. Also through participation, the student might learn more about the benefits of school as a means towards getting into college or getting a job. Other students or adults might expose the student to the benefits of school as a way to succeed. Finally, as he/she gets involved with the planning of an activity, he/she realizes that the school functions well and begins to see the school as a more fair and legitimate place. All of these developments increase the student's overall sense of connection to the school. This connection helps shape the

student's values and attitudes, thus influencing his/her decision-making. This student, then, is more prone to behave consistently with the values of the school and thus less deviantly.

Developmental Timing

Adolescence is a time that is especially suited for evaluating this model. Research has suggested adolescence is a period of increased cognitive capacity in a variety of abstract and conceptual domains (Keating, 1990). These changes have been argued to result in a fundamental shift in an adolescent's view of his/herself and his/her role in the social world (Harter, 1990). These developmental shifts have also been posited to increase the importance of extra-familial systems (Berndt, 1979). As an increasingly important social context, school, and one's connection with it, can have tremendous impact upon an adolescent who is developing his/her understanding of his/her role in the social milieu (Brofenbrenner, 1974; Calabrese, 1987; Weis & Hawkins, 1985).

Adolescence is also a time when the nature of school itself changes. Classrooms often become bigger and an individual student has several different teachers, all of which changes the dynamics of *school connection* (Calabrese,

1987; Brofenbrenner, 1974). Research has also noted a drop in student/teacher relationships and an increase in teachers' "us/them" perspective (Feldaufer, Midgley, & Eccles, 1988; Farber, 1984). These changes take place amidst adolescence when a youth is increasingly influenced by extra-familial systems and is developing a more complex social identity (Harter, 1990; Berndt, 1979; Brofenbrenner, 1974). Adolescence is a phase, then, when *school connection* might play an important role in mediation of the effects of extracurricular activity participation.

In sum, as youth develop socially they are influenced by interaction and involvement which occurs within distinct social contexts (e.g. school, peers, family, [Hawkins & Weis, 1985]). Participatory activities that occur within these social contexts can be a milieu which shapes how a youth views his or her link to the particular context (Burbach, 1978; Nover, 1981; Fetro, 1987; Finn, 1989; Otto & Alwin, 1977; Marsh, 1992). It is argued in this study that extracurricular activities in particular can affect a youth's understanding of the school as a social institution. It is further argued that this sense of *school connection* can be an important influence upon an adolescent's deviant behavior.

Research Questions

The following research questions will guide this study:

1) What constitutes the *school connection* construct?

2) Is extracurricular activity participation associated with a decreased likelihood of youth problem behavior?

3) Is extracurricular activity participation associated with an increased sense of *school connection*?

4) Is *school connection* associated with a decreased likelihood of youth problem behavior?

5) Does *school connection* mediate the relationship between extracurricular activity participation and youth problem behaviors?

Chapter II

Literature Review

An integrative model of the kind proposed in Chapter I necessitates a review of research from several fields of study. Towards this end, the first section of the current review will explore previous research on the relationship between extracurricular activity participation and various youth problem behaviors. This section will be followed by a review of the research on the process by which EAP contributes to improved outcomes. Additionally, the varied treatments of the concept of *connection* will be reviewed, followed by examples of research into the relationship between connection and problem behaviors. This review, while not exhaustive, will provide both theoretical and methodological information for the current study.

Extracurricular Activity Participation*

EAP and Problem Behaviors

The preponderance of research on EAP has focused upon outcomes associated with academic achievement (for reviews see Steinberg et al., 1988; and Holland & Andre, 1987). Researchers in this field have compiled impressive cross-

* See Appendix A. for a chart comparing relevant research.

sectional and longitudinal findings which have demonstrated EAP's association with academic achievement variables such as test scores (Lander, Feltz, Obermeier & Brouse, 1978; Feltz & Weis, 1984; Gerber, 1996), fulfillment of academic goals (Otto, 1975), grades (Marsh, 1992; Haensly, et al., 1986; Otto & Alwin, 1977; Parish, 1984: Hanks & Eckland, 1976; Helm, 1990), academic honors (Marsh, 1992; Haensly et al., 1986), and educational attainment (Lindsay, 1984; Hanks & Eckland, 1976). In an attempt to explain this association, some scholars have suggested that participation in activities encourages academic success through socialization which occurs within an activity (Spady, 1970; Otto & Alwin, 1977; Marsh, 1992; Hanks & Eckland, 1976; Finn, 1989; Gerber, 1996).

A parallel research effort has investigated whether participation and the supposed socialization therein not only influence academic outcomes, but affect non-scholastic behavior as well. This research has considered whether the effects of EAP can be generalized to other youth behaviors. An initial attempt to examine the relationship between EAP and delinquency, for example, was put forth by Schafer (1969). The author compared the delinquency records of 164 male athletic participants and 421 male non-participants. The author found a significant negative relationship between

athletic participation and delinquency, even when grades and father's occupation were statistically controlled.

In an attempt to extend the above findings to other categories of extracurricular activities, Landers and Landers (1978) compared extracurricular activity participants and non-participants on their respective delinquency records. Analysis of variance testing revealed *athlete-only*, *athlete-service*, and *service only* participants were significantly less likely to have been adjudicated for delinquent acts as compared to non-participants. These results were obtained even after socioeconomic status (SES) was controlled. There were no significant differences found between activity categories. The authors concluded that there seems to be an important negative relationship between EAP and delinquency.

Additional research has investigated the relationship between EAP and problem behaviors using substance use as the variable of interest. Shilts (1991) measured 237 seventh- and eighth-grade students on their substance use, involvement in extracurricular activities, friend's substance use, family involvement, and personal attitudes. Three groups categorized by the author (*non-users*, *users*, and *abusers*) were compared using *Chi*-squared tests. The non-user and user groups were significantly different, with non-users reporting more extracurricular activity

involvement, more family involvement, and less friends' substance use. The authors concluded that these results suggest a profile of a youth substance user as an individual who spends less time in conventional, extracurricular activities and is more connected to antisocial, peer culture.

Another study compared different *types* of extracurricular activities and their respective effect upon substance use (Cooley, Henriksen, Nelson & Thompson, 1995). Using a cross-sectional sample of 5,639 secondary students, Cooley and colleagues measured reported substance use and EAP (measured dichotomously using the categories of *athletics*, *government clubs*, *music and drama*, and *multiple activities*). *Chi*-squared tests revealed that students involved in *athletics* and *student government* were prone to experimentation and use of more socially accepted substances like alcohol and cigarettes, while those involved in other or multiple activities used less of these substances. For illicit drug use, those who participated in any type of extracurricular activity were significantly less likely to have experimented with, or frequently used these substances. These results suggest that conventional adult values seem to be reflected in participants' substance use behaviors. It seems, however, that different activities might yield different patterns of influence.

Additional research has been conducted to investigate the relationship between EAP and another important problem behavior, school dropout (McNeal, 1995). McNeal (1995) sampled 14,249 high school students at a baseline and then two years later. Logistic regression models, controlling for ethnicity, sex, age, SES, academic ability, academic/vocational track, and hours working, were employed to predict dropout. Four dichotomously measured categories of extracurricular activities (*Sports*, *Fine arts*, *Academic clubs*, and *Vocational clubs*) were separately entered into the overall equation. Only Sports and Fine Arts participation were significantly related to continued student attendance.

Mahoney and Cairns (1997) further examined the relationship between EAP and dropout. The authors followed a group of 7th grade students through 12th grade, assessing them annually. Using multiple regression equations, the authors found that for those students who were deemed "at risk" at the 1st wave, there was a significant positive relationship between participation in activities and continued student attendance.

It appears that there is some evidence to suggest that EAP can prevent dropout, particularly for those who are "at risk" (McNeal, 1995; Mahoney & Cairns, 1997). The question remains whether the effects of EAP generalize to other

problem behaviors such as delinquency, truancy, or substance use. The research on these other problem behaviors, is not as convincing. For the most part, these studies have not controlled for variables which are known to be associated with deviant behavioral patterns, e.g., SES, ethnicity, sex, and age (Landers & Landers, 1978; Cooley et al., 1995; Shilts, 1991; Jenkins, 1996). In measuring EAP, several of these studies simply ask youth whether or not they participate in an activity (Jenkins, 1996; Shilts, 1991; Cooley et al., 1995; Schafer, 1969; Landers & Landers, 1978). Many other researchers, however, have argued that not only is participation important to measure, but a youth's *level of participation* can be an important factor predicting success (Marsh, 1992; Gerber, 1996; Mahoney & Cairns, 1997; Hanks & Eckland, 1976; Nover, 1981). Thus, further rigorous study is needed to test the hypothesis that EAP influences non-academic problem behaviors.

The Process of EAP Impact

Although several scholars have speculated as to the process whereby EAP affects behaviors, few have empirically examined possible explanations (Holland & Andre, 1987; Brown, 1988). One of these efforts examined whether relationships with adults in the context of an activity influenced the impact of EAP (Snyder, 1975). The study

revealed that those participants who had closer relationships with their coaches had significantly higher educational aspirations. Snyder concluded that pro-social relationships within an athletic activity might in some way contribute to improved academic outcomes.

Hanks and Eckland (1976) also investigated the importance of prosocial relationships within the context of extracurricular activities. The authors surveyed high school sophomores in 1955 and again in 1970. Employing multiple regression equations, the authors found that participation in non-athletic extracurricular activities (e.g. drama, debate, and student government) had a strong association with academic achievement, even when academic aptitude and sociodemographic variables were controlled. Hanks and Eckland also tested the mediation effects of teacher and college-oriented peer relationships. Both of these variables demonstrated significant mediation effects. The authors suggested that social relationships experienced in an activity might be important reasons for prosocial participant outcomes.

Otto and Alwin (1979) further examined prosocial relationships as a possible explanation of the effects of participation. Otto and Alwin measured the predictive value of EAP upon future educational success. In addition, the authors tested several factors which might mediate the

relationship between EAP and educational outcomes. While other variables tested did not yield significant results, peer aspirations, degree of encouragement from friends, and parental encouragement were found to be significant mediators of EAP impact, even after several sociodemographic and academic aptitude variables were statistically controlled. The authors contended that although prosocial relationships are indeed important, their importance can be measured by their influence on the values and attitudes of participants. It is these values and attitudes, the authors argued, which directly influence outcomes.

Marsh (1992) has investigated which internal conceptions in particular might be the source of EAP's effects. Marsh (1992) followed 10,613 students for two years, from their sophomore to senior years of high school. Multiple regression analysis revealed EAP to be a significant predictor of higher senior grades, honors, homework, locus of control, and academic and social self-concept and lower absenteeism and trouble. These results remained even when SES and ability levels were controlled. The author also tested the value of self-concept as a mediator of the impact of EAP. The only self-concept measure that seemed to have any mediation value was academic self-concept, (which in this study was composed largely of a youth's reported attitudes about school). In conclusion,

the author argued that these findings support a *commitment to school* rather than a *self-esteem* model. The *commitment to school* hypothesis predicts that experiences within an extracurricular activity enhance a youth's commitment to school which mediates positive effects on outcomes.

Other researchers have examined EAP's relationship to concepts similar to Marsh's (1992) definition of *commitment*. Nover (1981) examined the effect of extracurricular participation on variables which measured the bond between a youth and his/her school. The author tested 239 high school students on their grades, extracurricular activity involvement (tested dichotomously, by hourly involvement, and by offices held) and their feelings of connection to the school. The authors conceptualized connection as: a perceived sense of belonging to the school; a perceived sense of influence on the school; a perceived sense of school functioning; and perceived social support. The authors found that EAP involvement was significantly associated with all of the *school connection* variables. This relationship persisted even when SES and sex were statistically controlled. The authors concluded that EAP impacts students' feelings about their school and their role within it.

Summary

The limited research which has investigated how EAP impacts youth behavior suggests that the social interaction experienced within an activity is the mechanism of the supposed influence (Hanks & Eckland, 1976; Snyder, 1975; Spady, 1970; Otto & Alwin, 1979). Researchers have only hypothesized, however, about what internal representations or understandings these mechanisms might influence. Although many researchers have suggested the importance of a sense of *school connection* (Finn, 1989; Marsh, 1992; Mahoney & Cairns, 1997; McNeal, 1995; Spady, 1970), few studies have examined the link between EAP and a youth's understanding of connection. The studies that have been conducted, however, suggest that there are important relationships between EAP and connection (Nover, 1981; Fetro, 1987). It is argued that experiences within extracurricular activities affect an individual's understanding of the meaning and character of the school as a social institution (Finn, 1989; Nover, 1981; Marsh, 1992; Mahoney & Cairns, 1997). This thesis is in great need of additional examination and testing.

Connection

According to the above review, a psychosocial sense of connection might be an important variable in which to explain the impact of EAP upon various outcomes. Before

proposing a model to test this hypothesis, it is necessary to clarify the concept of *connection*. The first section reviews the literature's varying treatments of connection. Following this section, studies are presented which examine the effects of a sense of connection.

Alienation of man/woman has been an important theme in philosophy since the dawn of the industrial revolution. Hegel and Marx spoke of alienation as a feature of industrialization which isolated workers from their work and indeed from their world (for a review of this tradition see Denise, 1977). Fromm (1973) considered alienation to be a reflection of modern man's disconnection from our more natural, traditional roots.

This rich philosophical history has inspired operationalization and testing by more empirically oriented traditions. Fields as diverse as organizational psychology (Kurango, 1979) and criminology (Hirschi, 1969) have developed constructs that resemble *alienation*, or its antithesis, *connection*. Although the literature on connection and alienation is widespread and varied, several theoretical traditions can be identified. This review will briefly explore these traditions and illustrate how, indeed, they seem to have commonality. Moreover, I will summarize limitations in the respective theoretical treatments which

suggest the necessity of a new conceptualization for the purposes of the current study.

Alienation

Alienation as an empirical construct was studied most actively in the 1960s and 1970s (Fetro, 1987). It is based on the premise that human beings, regardless of the social phenomenon, inherently seek out connection (Kurango, 1979; or Fetro, 1987; Newman, 1981). Alienation, then, results from a frustration of this inherent drive (Newman, 1981; Seeman, 1975).

Seeman (1959) outlined the most frequently cited framework for the study of alienation (for a content analysis see Fetro, 1987). Based on the existing literature and his own research, he outlined several different conceptualizations of alienation. Subsequently, these different types of alienation have been used as components of alienation (Fetro, 1987; Neal & Rettig, 1967; Dean, 1961). His categories of the types of alienation are: 1) *powerlessness*-the sense of low control-mastery over events; 2) *meaninglessness*-the sense of incomprehensibility vs. understanding of personal or social affairs; 3) *normlessness*- high expectancies for commitment to socially unapproved means vs. conventional means for the achievement of given goals; 4) *self estrangement*- the individual's

estrangement in activities that are not intrinsically rewarding vs. involvement in a task for its own sake; 5) *social isolation*- the sense of exclusion or rejection vs. social acceptance. These divergent yet related types of alienation have grounded the study of alienation, particularly within the fields of social psychology and sociology (Fetro & Fitello, 1988).

In this theoretical tradition several features can be identified which suggest a new approach is needed for the purposes of this study. Firstly, alienation has been argued to be a global phenomenon (Seeman, 1975). An individual, it is contended, possesses a level of alienation in relation to the world as a whole. Accordingly, most instruments in this tradition assess an overall sense of alienation (Dean, 1961; Groat & Neal, 1975; Neal & Rettig, 1967; Seeman, 1959). The instruments, which have been used in the bulk of alienation research, pose self-statements such as: *The international situation is so complex that it just confuses a person to think about it;* or *More and more I feel helpless in the face of what's happening today* (Groat & Neal, 1975; Dean, 1961). Other researchers, on the contrary, have argued that alienation is a phenomenon which has distinct patterns and levels respectively for family, peer and school contexts (Brofenbrenner, 1974, Burbach, 1972; Krohn and Massey, 1980; Calabrese, 1987; Richmond, 1985; Hindelang, 1973; Marcos et

al., 1986; Barber & Olsen, 1997). The theoretical position taken by most alienation literature overlooks the contextual distinctiveness of an individual's relationships.

In addition, this tradition considers alienation to be a *structural* rather than an *individual* phenomenon. That is, alienation is said to be a feature of the social circumstances in the life of an individual (Newman, 1981). Alienation is defined less as an individual perception, the result of an interaction between internal and external circumstance, but more as a feature of the social context in which the individual resides. This interpretation neglects individual attitudinal and perceptual differences which distinctively influence an individual's sense of connection/alienation (Newman, 1981; Fetro & Vitello, 1988). It is important to view connection/alienation as a dynamic transaction between social contexts and individuals, complete with their distinct personal characteristics and personal histories.

Finally, alienation studies have focused strictly on the negative side of the ledger, considering only the negative extreme of the connection/alienation continuum (Kurango, 1979). This approach is useful when attempting to identify alienating circumstances or the perceptions of alienating circumstances. In order to inform practitioners on how to successfully organize activities, it seems

important to focus upon *connection* and factors that contribute to its development.

In sum, the theoretical and empirical literature that has studied alienation has increased our understanding of the process of global alienation and its effects. Alienation as a construct might not be useful, however, in considering levels of connection particularly if one's focus is the school context.

Social Control

One of the most important theories in the sociology of juvenile delinquency is Social Control theory (Hirschi, 1969). Control theory contends that individuals are naturally inclined to commit deviant acts and that the strength of one's social bond to conventional society mediates this propensity. Hirschi (1969) posits that components of any social bond include: personal *attachments*, *commitment* to conventional aspirations; *involvement* in conventional activities, and *belief* in the conventional system. *Attachment* involves the presence of social and emotional ties to others. Hirschi argues that these ties must have a sense of importance or meaning to the individual. When youth think that the ties with conventional individuals are important and meaningful, they care what these conventional others think and are more

likely to behave consistently with conventional values. *Commitment* as an element of social bonding emphasizes the practical, rational factors which encourage adherence to society's conventions. Hirschi posits that commitment stems from a rational analysis of what one needs to do in order to achieve internal goals. For example, understanding the importance of staying in school in order to graduate and get a good job contributes to a sense of commitment to the society. The third element is *involvement* in prosocial activities. The more youth are involved in activities which are endorsed by conventional society, the more likely they are to view society positively. Finally, Hirschi argues that youth have *beliefs* in the efficacy and legitimacy of conventional society. Without this belief youth are prone to disconnect from the prosocial society. All these elements together cement the social bond youth have with society's conventional values. Accordingly, the stronger the bond youth have with conventional society, the more likely they are to behave prosocially.

Control theory also has several features which suggest a new approach is needed for the purposes of this study. This orientation, like the alienation orientation, has a global perspective in its assessment of the success of a social bond. Hirschi's (1969) social control theory overlooks the possibility that particular contextual systems

(e.g. school family, peers) might each have a distinct social bond pattern and thus necessitate distinct consideration and assessment. As Marcos and colleagues (1986) assert, "...social control influences of parents, school, and peers are simply too theoretically and empirically distinct to be treated as one construct", (p.137-138).

In addition, social control theory (Hirschi, 1969) presents *involvement* in conventional activities as one of the theoretical elements of a social bond. Other components, (*belief*, *commitment*, and *attachment*), seem to define psychosocial phenomena which assess a youth's understanding of their relationship to a social institution. Involvement, as Hirschi (1969) defines and measures it, however, is a social behavior and does not have conceptual consistency with the other elements of the social bond (Krohn & Massey, 1980). As an illustration, Hirschi (1969) assessed involvement by measuring a youth's participation in extracurricular activities and time spent doing homework. Participation in a conventional activity, although related to *commitment* and other elements of a bond, does not necessarily produce an increased sense of a social bond (Krohn & Massey, 1980). Thus, inclusion of involvement as an element of a bond does not add to the

conceptual and empirical clarity of the social bond construct.

Control theory has provided a foundation for much of the research on delinquency. Nevertheless, a conceptualization which is composed of analogous psychosocial elements and assesses institutions independently, would be an important contribution to the literature and would add efficacy to the current study.

School Belonging

Learning and education theorists have also utilized concepts similar to the above-described traditions. Maslow (1962), for example, argued that a sense of *belonging* was a necessary precursor to knowledge and understanding in a learning hierarchy. More recently, several researchers have argued that *relatedness* to one's learning environment is a fundamental element in one's motivation to learn (Ryan, Stiller, & Lynch, 1990; Cornell & Wellborn, 1990). Relatedness is defined as the existence of "secure and satisfying connections with *others* in the social milieu", (Deci, Vallerand, Pelletier, Ryan, 1991, 327). This relatedness encourages an embracing of the norms and values of the larger learning environment (Deci et al., 1991).

Goodenow (1993a) has also posited the importance of a sense of connection in a youth's behavioral motivation. She suggests that *belonging* directly impacts motivation, which in turn influences youth behavior. The author argues that much of the motivational research focuses on strictly cognitive influences: variables like self-efficacy (e.g. Schunk, 1989), or expectations for success or failure (Weiner, 1985). Goodenow (1993a) submits, as defensible as these relationships to motivation might be, there is a larger environmental-dependent constituent that frames the development of these and other factors. Goodenow posits this construct as *school belonging* (1993a), or later as, *psychological sense of school membership* (1993b). Goodenow (1993a) defined *belonging* as, youths' "sense of being accepted, valued and included, and encouraged by others, (teachers and peers) in the academic setting and a feeling of oneself to be an important part of the life and activity of the classroom" (Goodenow, 1993a, 25). She claims that belonging involves mutual support and respect.

As with the other theoretical treatments, these constructs have several shortcomings which suggest a new approach for this study. Firstly, these educationally oriented conceptualizations lack critical theoretical details. The concepts are defined only by one or two lines of explanation (Goodenow, 1993a; Deci et al., 1991). The

reader is left wondering about the necessary elements of the construct or how these attitudes or perceptions might lead to improvements in outcomes. In addition, little empirical research has been done to assess these constructs. Thus, the theoretical details necessary to these perspectives have not been provided.

These educational perspectives also seem to focus on one particular aspect of a connection bond. For example, school belonging (Goodenow, 1993a) and relatedness (Ryan et al., 1990) are primarily concerned with the socioemotional bond a student has with other individuals in the school context. These approaches omit the rational or cognitive elements of a connective bond. A youth's understanding of the rational importance of a social bond might indeed be fundamental to its strength (Wehlage, Rutter, Smith & Lesko, 1986).

Although these educational perspectives speak more in the positively oriented lexicon of *belonging* and *commitment* and focus particularly on the school context, they nonetheless fall short of explaining the necessary and sufficient elements of their approach. Furthermore, they seem to focus solely on socioemotional aspects of the social bond.

Summary

These diverse theoretical traditions (alienation, control, and belonging) seem to be proposing and studying similar phenomena. Fundamentally, these traditions posit an internally perceived link between the individual and social contexts. Each perspective, however, has its own particular elements of connection. More importantly for the purpose of the current study, these treatments have shortcomings which make them untenable for the proposed model. These approaches need to be consolidated in a rigorous, context-specific fashion in order to efficaciously test the current model. A definition that will more strictly meet these needs will be offered in Chapter III.

Connection and Problem Behaviors[*]

Although the above theoretical traditions are not in agreement as to the particular organization of connection, they do converge on the premise that an individual's understanding of a social connection can impact his/her behavior. Indeed, the bulk of research that these traditions have generated has investigated the relationship between a sense of connection and outcome behaviors (see Fetro, 1987; Gottfredson & Hirschi, 1990). Since this relationship is at the center of the proposed model, key

[*] See Appendix B. for a chart comparing the reviewed studies.

studies, which represent this extensive literature, are systematically reviewed.

Hirschi's 1969 study is an oft-cited example of the relationship between a youth's social bond and his/her social behavior. He measured *Attachment* (to school, parents, and peers), *Belief* (in law enforcement and overall social structure), *Commitment* (to conventional educational, professional, and financial aspirations), and *Involvement* (hours participating in conventional activities). Hirschi found inverse relationships between social bond items and delinquency. Hirschi concluded that deficiencies in these social bond elements are fundamental causes of delinquency.

Other authors, using the social control perspective, have investigated whether problem behaviors such as substance use might demonstrate a similar association. Krohn, Massey, Skinner and Lauer (1983) measured 1,076 secondary students' social bonds and smoking behavior at Time 1 and then one year later at Time 2. The authors factor analyzed 36 items that represented *attachment*, *commitment* and *belief*. The factor analysis suggested three different attachment factors (parent, friends, and school), three different commitment factors (work, school activities, and education), and two different belief factors (propriety of cigarette, and other substance use). Multiple regression equations revealed that school and parent *commitment* and

belief variables were predictive of a decreased likelihood of smoking behavior at Time 1 and Time 2. Peer *attachment* was also found to have a positive relationship with smoking behavior. The authors concluded that, although these findings do not validate Hirschi's model precisely, they do suggest that conventional social bond levels are important predictors of substance use.

Other theoretical traditions have also argued that connection/alienation levels are related to problem behaviors. Calabrese and Adams (1990), seeking to test the hypothesis that alienated youth are more prone to delinquency, measured incarcerated (n = 157) vs. non-incarcerated (n = 1,318) adolescents. The authors used the *Dean Alienation Scale* (Dean, 1961), which measures several of Seeman's (1959) types of alienation (*isolation*, *normlessness*, and *powerlessness*). The authors found significant differences between incarcerated and non-incarcerated youth for *powerlessness*, *isolation* and total alienation scores. The authors concluded that alienated youth are more likely to be delinquent.

Another study used a cross-national sample to consider the relationship between alienation and substance use behaviors (Nutbeam & Aaro, 1991). The authors measured sociodemographics and alienation (using three global items). The alienation items were found to be positively associated

with youth substance use. The authors found this relationship was fairly consistent across nations and sociodemographic categories. The authors discussed these findings as evidence of youth-alienation's relationship with substance use behavior.

These and other similar findings (e.g. Moyer & Motta, 1982; Beneke, 1970; Hindelang, 1973; Krohn & Massey, 1980) have suggested that youth behavior is influenced by their understanding of their connection with the larger social order. Brofenbrenner (1974), however, has argued that different social contexts (school, family, etc.) have distinct developmentally-guided patterns of influence. He has further argued that school, and a youth's sense of connection to it, has its own important influence upon youth behavior, particularly for adolescents (Brofenbrenner, 1974; Calabrese, 1987).

Several researchers, in accordance with this thesis, have investigated the degree of association between a youth's sense of connection to school and his/her behavior. Reid (1981), for example, investigated the relationship between alienation levels and levels of school attendance. A youth's sense of alienation was measured using eight items garnered from the Dean (1961) and Neal and Rettig (1967) alienation scales. These items, however, were adapted to assess the school context in particular (e.g. *I can't make*

much sense out of what happens at this school). The absentees were compared with control groups on single item aspects of alienation. Significant differences were found for items that assessed *school belonging*, *helplessness*, and *confusion*. The author concluded that students who are alienated from school are more prone to absenteeism.

Goodenow and Grady (1993) examined the relationship between school belonging and a broad range of school-related outcomes. The author administered the *Psychological Sense of School Membership* scale (PSSM) to a diverse sample of 755 secondary students. School belonging was found to be significantly correlated with school achievement, grades, expectancies for school success, attendance, and lack of tardiness. The author concluded that this empirical examination offered important preliminary evidence for the influence of sense of school belonging upon youth academic and non-academic behavior.

Using a concept similar to Goodenow's (1993a) *school belonging*, Battistich and Hom (1997) tested its relationship to a variety of youth problem behaviors. The authors sampled 1,434 fifth- and sixth-grade students from schools throughout the U.S. The authors measured a construct, *sense of the school as a community*, which they defined as students' having caring, supportive relationships, and autonomy and control over the school environment. Multiple

regression analysis found that higher levels of *school-community* were associated with significantly less substance use and less delinquent activity. These authors suggested that the school context, and a youth's understanding of it, is an important influence upon youth behavior.

A similar study was conducted using a social control perspective (Jenkins, 1997). Jenkins (1997) sampled 754 middle school students, measuring their school commitment, belief in school, attachment to school, and school involvement. Using a path analytic procedure, Jenkins found direct relationships between belief, commitment, and attachment for school crime and school misbehavior. She also found direct relationships between belief and commitment and attendance. These relationships persisted despite the statistical control of numerous sociodemographic variables. This study is in agreement with other studies which have found a significant link between youth sense of *school connection* and their behavior (Goodenow & Grady, 1993; Goodenow, 1993b; Richmond, 1985; Hershaff, 1978; Reid, 1981; Elliot & Voss, 1974).

Summary

In sum, these studies seem to have established an important association between *school connection* and youth behavior. Few empirical studies, however, have investigated

factors which might increase a youth's sense of connection. Much of the existing body of research has focused solely on sociodemographic variables. Researchers have found that *school connection* differs between socioeconomic groups (Fetro, 1987; Raymond, 1983), ethnicities (Trusty et al., 1993; Calabrese & Poe, 1990; Moyer & Motta, 1982; Fetro, 1987; Raymond, 1983), sexes (Hendrix, Sederberg & Miller, 1990; Trusty et al., 1993; Calabrese & Seldin, 1986; Fetro, 1987; Raymond, 1983), and age groups (Fetro, 1987; Trusty et al., 1993; Raymond, 1983).

While these variables are important considerations in assessing a youth's level of connection, those who seek to prevent deviant youth behavior are interested in determining which methods, in particular, might impact a youth's sense of *school connection*. Social development theory (Hawkins and Weiss, 1985) and participation/identification theory (Finn, 1989) both hypothesize that participatory activities, those which involve youth in conventional environments and nurture conventional relationships, can positively affect a youth's sense of *school connection*. Some preliminary studies have indeed found that extracurricular activity participation might be associated with higher levels of *school connection* (Fetro, 1987; Nover, 1981; Burbach, 1978). According to the reviewed research and the theoretical foundation outlined in Chapter I, a causal model

interpreting the relationship between EAP, *school connection*, and problem behaviors can be proposed. This interpretation suggests that participation in extracurricular activities encourages a sense of connection to school. This sense of connection influences a youth to behave more consistently with adult-conventional values. A detailed description of how this thesis will be tested will follow in Chapter III.

Chapter III.

Methods

Definitions

Extracurricular Activities

Although most of the literature researching extracurricular activities has been limited to athletic activities, an extracurricular activity can not be equated solely with athletics (Holland & Andre, 1987). Extracurricular activities are programs which fulfill two basic conditions: 1) they are not part of the regular curricular program; and 2) they are structured in some way (not just socializing, but working towards some prosocial mission or goal) (Holland & Andre, 1987). This definition is obviously a broad one. One purpose of this study is to refine the definition of what is an effective extracurricular activity. By defining extracurricular activities inclusively, I am able to consider a broad spectrum of activities so as to compare their relative predictive importance within the proposed model.

Included in this study of extracurricular activities are activities, which are outside of school (for the exact extracurricular activity items used in this study see a copy of the survey in Appendix C). Considering outside-of-school

activities provides the opportunity to compare the patterns of these activities with more traditional, school-sponsored extracurricular activities.

Problem Behaviors

This model will test both school- and non-school-related problem behaviors in order to determine the overall validity of the proposed hypothesis. I will consider problem behaviors as indicators of larger latent phenomenon such as school-related failure and societal deviance. The variables that will be used to test these phenomena will be attendance and substance use. These variables are important indicators of conduct which represents an adherence to prosocial values; furthermore, these variables are important problem behaviors themselves and are at the center of much public concern (McNeal, 1995; Cooley et al., 1995).

School Connection

Since *school connection* as it is employed in the proposed model is an original construct, an explicit definition is necessary. An individual's sense of connection, as it relates to a particular social institution, is posited to be composed of the following psychosocial elements:

- *Power* is defined as the perceived ability to control aspects of the organization or institution; it is

the expectancy or probability held by the individual that his/her behavior can influence the structural or functional characteristics of the social institution;

- *Commitment* is defined as the expectancy that adherence to the rules and goals of the social institution is rewarded. It is an understanding that it is beneficial, as measured from one's own perspective, to accept various social institutions' values and goals;
- *Belief* is defined as the perception that the social institution's structure and function are fair and efficacious, thus promoting a sense of validity. Belief is the sum of understandings that the social institution is properly organized and administered;
- *Belonging* is defined as being connected by virtue of personal relationships with other members of the institution. These attachments are defined as ones that are understood to provide a degree of acceptance and emotional support.

In order to move forward with this new inclusive conceptualization of connection, some clarifications need to be made in order to create a more complete and coherent construct. Firstly, connection is an individual *as well as*

a structural, phenomenon. That is, connection is based on the perception of the individual. Although this perception is dependent on the characteristics of a social institution, it is not determined by them. This distinction can be illustrated by an example whereby an organization maintains an alienating climate such as a lack of input in decision-making. This circumstance might be alienating to some individuals, while not at all to others (Newman, 1981). Connection is an inter-relationship between an individual and a social institution. The perception that a circumstance or relationship is alienating is one which is subject to individual perceptual and cognitive interpretations. Moreover, these perceptions and cognitions are influenced by a history of past connection experiences (Finn, 1989; Brofenbrenner, 1974).

Another fundamental distinction is that an individual's sense of connection differs from social institution to social institution (Kurango, 1979). For example, an individual might have an alienating relationship with his/her school while being highly connected to an antisocial peer group like a gang. Considering social contexts independently is more consistent with existing research which has found that subjects demonstrate differential patterns of connection (Marcos et al., 1986; Krohn & Massey, 1980; Hindelang, 1973; Richmond, 1985; Barber & Olsen,

1997). Given that the school and its activities are the current context of interest, this study will examine *school connection* in particular.

A youth's sense of connection to his/her school has to be understood as a developmental phenomenon, one which is highly dynamic and interactive. According to Ford and Lerner (1992) and their Developmental Systems Theory, individual development is a sequence of transactions between multiple levels of systems. These systems, they argue, range from the cellular to the cultural level and are constantly transacting over time. A pattern of *school connection* is the result of a transaction between a contextual system and the individual, with all his/her personal and cultural subsystems (Finn, 1989; Brofenbrenner, 1974). This pattern, then, is ever changing over time and is constantly interacting within and without the individual.

Procedure

In order to obtain a diverse sample to test the school connection mediation model, 6th- through 12th-grade students were surveyed from two different school districts. One of the school districts is largely suburban and populated by generally high- and middle-socioeconomic status families. The other is a suburban/urban school district and is composed of mainly low- and middle-SES families. Both

districts are located in the East Bay region of Northern California.

The overall student population for the first district is 35,886 of which approximately 50 percent are secondary students (Mt. Diablo Unified School District Records, 1996). The district maintains nine middle schools, six high schools, and one continuation school. Sixty-seven percent of the students are *European-American*[*], 16 percent *Hispanic-American*, 8 percent *Asian-American*, 5 percent *African-American*, 3 percent *Filipino-American*, and 1 percent *Pacific Islander-American*. Approximately 10 percent of student families receive Aid for Families with Dependent Children (AFDC). Over the past 10 years this district has seen an increase in student population, ethnic diversity, AFDC participation, and ESL participation. This school district has also seen a decline in student proficiency scores on math, reading, and writing exams. The number of incidents of problem behaviors has also generally increased.

The second school district has a total student population of 32,288, approximately fifty percent of who are secondary students (West Contra Costa Unified School District Bulletin, 1996). The district has five middle schools, five high schools, and 11 alternative schools. The

---

[*] School district number one and number two use different ethnic groupings to categorize their student population. In this description of each district, the categories from district records have been used.

ethnic distribution is: *American-Indian*, .5 percent; *Asian and Pacific Islander*, 13 percent; *Afro-American*, 35 percent; *Filipino*, 5 percent; *Hispanic*, 24 percent; and *White*, 22 percent. On average, 25 percent of the families whose children attend this district receive AFDC. The district's sociodemographic composition has been relatively consistent over the past ten years. This school district has also seen a decline in student proficiency scores on math, reading, and writing exams. The district is among the state's lowest performing on most of the standardized state exams. This district has also seen an increase in the occurrence of problem behaviors.

The sampling procedure was designed to obtain subjects who represented both district populations. Since it was unfeasible to assess all students within both districts, it was decided that several classes were to be chosen from each school site. Each school was randomly assigned grade levels to assess. For example, one high school might be directed to sample two 10^{th} grade classes and two 12^{th} grade classes. Because of the scheduling difficulties that are particular to each school site, school administrators (principals, vice-principal, or student service administrators) who were familiar with instructors and site-scheduling were directed to choose the actual classes that were to be surveyed. School administrators were instructed to choose class(es)

which represented the diversity of the overall school population (for a copy of instructions see Appendix D). This procedure was also used at the alternative secondary schools. The students of the targeted classes were contacted by site administrators and asked to participate in the study. Students were given the appropriate consent forms and encouraged by teachers to return them (see Appendix E). Students who completed the forms were allowed to participate in the study.

Each survey administrator was trained by the author on a standard administration protocol (see Appendix F). Survey administrators were contracted from local community counseling agencies and were not familiar with the schools or the students at their respective administration sites. The survey administrators reported a varied amount of time for administration, from 20-40 minutes. The administrators assisted students who had difficulties with the language and content of the survey. This assistance, in cases where there was English language difficulty, consisted of reading particular items to a student. The survey was also translated into Spanish and distributed to students who requested Spanish-language versions.

To maintain the anonymity of the participants, no names or numbers were used which would help identify individual subjects. The completed surveys were put into folders.

These folders were put into boxes that were delivered to district headquarters.

There are several sampling weaknesses, which need to be discussed prior to continuing. Firstly, the sample itself was not strictly random. Site administrators (principals, vice-principal, or student service administrators) at each of the schools chose which classes were to be surveyed. Their instructions were to choose classes or a combination of classes that represented the diversity of the school as a whole (see Appendix D). Practically, it must be understood that these administrators might have chosen classes based on reasons of convenience. Thus, the sample in this study might not genuinely represent the combined school districts' population.

Another methodological weakness is that school districts were sampled under different conditions. Firstly, the survey administrators at each of the districts were different. Secondly, the survey was administered at different times during the school year. The first district administered the survey in spring 1997, the second district in fall 1997. Finally, for the second district this was the first year of this survey's administration. For district number one, this was its fourth year administering this survey. Together these differences might confound findings that seem to occur as a result of the different

sociodemographic compositions. For example, results might suggest that lower SES youth have a higher sense of *school connection*. This finding, however, might be due to the fact that a larger proportion of the lower SES youth were sampled in the earlier part of the year when they felt more positive about school and their relationship to it. Thus, these sampling differences have to be examined carefully through appropriate preliminary comparisons.

Participants

In total, 1,756 students were surveyed during the 1997/1998 school year (see Table 1 below). The sample seemed to be equally distributed by sex, grade level, and ethnicity. Free lunch, however, as an indicator of socioeconomic status seemed to be skewed. Approximately one quarter of the sample reported receiving free lunch.

Table 1. *Participant data.*

n=1,756 Variable	Sample Composition
Sex	
Male	46.4%
Female	53.6%
Grade level	
6^{th}	9.4
7^{th}	27.9
8^{th}	15.5
9^{th}	10.1
10^{th}	10.8
11^{th}	17.6
12^{th}	18.7
Ethnicity	
Hispanic-Am.	18.1
African-Am.	16.4
European-Am.	21.8
Asian-Am.	14.8
Native Am.	2.8
Pac. Islandr.-Am.	4.0
Mixed/Other	16.4
Mother's ed. level	
Non HS grad.	14.1
HS grad. Only	23.1
Some college	23.9
College grad.	38.9
Father's ed. Level	
Non HS grad.	13.4
HS grad. Only	22.8
Some college	21.6
College grad.	42.3
Free Lunch	
Yes	25.6
No	74.4

One important weakness in this data collection effort was that those students who chose to participate seemed to be, in general, less "at risk" than those who did not participate. Since only those students who returned parent

consent forms were allowed to participate in the study, this process clearly affected the character of the sample. Response rates varied from school to school and ranged from 30 to nearly 100 percent. The overall sample response rate was 65 percent. The sample seemed to be of higher socioeconomic status than the combined district populations. District records of student eligibility for free lunch were compared to sample responses to a question on the receipt of free lunch. The district-recorded free lunch eligibility rates were slightly higher than the sample's self-report data. Moreover, random interviews with classroom instructors following the survey administration suggested that those students who did not participate were generally more "at risk". Thus, this sampling weakness must be noted and incorporated into any interpretations of the data.

Instrument

The survey instrument was part of the two districts' yearly assessment of the current state of their schools. The instrument also fulfills several funding agency requirements for assessment and evaluation. The instrument measures *school connection*, school safety, EAP, sociodemographics, and substance attitudes and use. The data for this study was obtained from the fourth year of

this survey's administration. The instrument was originally developed with approximately 30 focus groups from various schools (for a more detailed description of the design procedure see Brown and Dean, [1997]). Focus groups are a method designed to generate free flowing discussion around particular issues. Each group included 4-8 students and took approximately an hour to complete. The author of this study conducted these focus groups with assistance from University of California, Davis (U.C.D.) undergraduate students. The issues that guided the original discussions were *school connection* and safety issues (for a sample focus group script see Appendix G).

Items for the instrument were developed based on theoretical concerns, prior research, focus group discussions, and concerns of district administration staff. The draft form of the survey was reviewed and critiqued by teachers, students, U.C.D. academics, and school district staff. This process created the original survey. Each year following administration, focus groups were conducted with youth to help interpret the results and refine the survey. In addition, each year a principal component factor analysis was conducted on the *school connection* items in order to eliminate items that were redundant and did not uniquely contribute to factor groupings. Prior to each yearly

administration, the instrument was again reviewed*. In Spring 1996 a new substance use component was added. The final survey was a total of four pages (see Appendix C). Each year a report was issued detailing the results and conclusions (for example see Duckert & Brown, 1998).

Extracurricular Activity Participation

Extracurricular participation was measured by a group of items that prompted subjects to respond to: *How many hours per week do you spend doing the following activities?* Response choices were: *no hours, 1-5 hours, 6-10 hours,* and *over 11 hours.* An hourly participation format was used in order to gain a consistency between subjects and activity categories (Nover, 1981). It is also a scale that has applied meaning as well. Although a majority of the research in this field examines participation using a checklist format (*Did you participate in the following activity?*), this method does not measure the *degree* of participation (McElroy, 1980; Nover, 1981; Holland & Andre, 1987). Many researchers have argued that it is degree of participation which is telling (Feltz & Weiss, 1984; Snyder, 1975; Steinberg et al., 1988). Several categories of

* This survey design procedure was also used in the second school district. The survey was administered, however, for the first time in this district in Fall 1997. Thus, the review process was not conducted. The district surveys differed slightly in ways that did not affect this study (for example, the inclusion of items that asked a student whether he/she had attended particular prevention or intervention programs).

extracurricular activities were used (*sports*, *school-affiliated activities*, *non-school-affiliated activities*, and *fine arts*). These categories are based on suggestions from other researchers who have found activity categories to have distinct patterns of impact (Holland & Andre, 1987; Hanks & Eckland, 1976; McNeal, 1995; Gerber, 1996). Lastly, a summed total of activity participation was used to measure total extracurricular activity participation (TEAP).

School Connection

The *school connection* section of the survey contained items that attempted to assess the elements of *school connection* as defined in this chapter. The items were in self-statement form with responses: *strongly agree*, *agree*, *disagree*, and *strongly disagree*. The following items were used (presented here in their proposed categories):

Commitment

I can be a success at this school.
It pays to follow the rules at my school.
My schoolwork helps in things that I do outside of school.
I can reach my goals through this school.

Power

Adults at this school listen to students' concerns.
Adults at this school act on students' concerns.

The principal at this school asks students about their ideas.
I have many opportunities to make decisions at my school.

Belonging
I can be myself at this school.
I feel like I belong at this school.
I have friends at this school.
I am comfortable talking to teachers at this school about problems.

Belief*
The rules at my school are fair.
We do not waste time in my classes.
Students of all racial and ethnic groups are respected at my school.
When students have an emergency someone is there to help.

This study maintains a quantitative model of influence, whereby alienation and connection are at opposite poles on a continuum (Hirschi, 1969). These poles are distinguished by quantitative differences on a combined tally of the components of connection. The higher the *power*, *belief*, *commitment*, and *belonging* combined, the greater an individual's sense of *school connection*. As discussed above, these elements might have different patterns and levels but are nevertheless additive.

* Although some items seem to be objectively measuring school function, students respond to these items based on their subjective understanding of how the school functions.

A principal component factor analysis was conducted with the data in order to assess whether the hypothesized groupings were consistent with the sample data. Factor analysis is a procedure that is used to refine and group data. More specifically, factor analysis can be used as a formal decision-making process to determine subsets and larger sets of covarying items (Guertin & Bailey, 1970). An oblique rotation was used in order to allow the different factors to correlate, (which is consistent with this study's hypotheses). A Kaiser-Guttman method was used to determine the numbers of factors to be extracted.

Problem Behaviors

Problem behaviors were measured by self-report items on attendance and substance use. These variables were chosen for their domain diversity, societal importance, and their ease of measurement. One self-report item was used to measure attendance (see Table 2 for a distribution of responses). For substance use, a scale was developed for each of the substance use categories (*cigarettes*, *alcohol*, *marijuana*, and *other drugs*). The scales for each of the substance use categories were composed of three substance use items (for the exact wording of each item see Appendix C). The three items that composed each scale were ones that attempted to distinguish between *heavy* and *infrequent* users

in addition to *non*-users (see Table 3-6 for the distribution of responses). Research has found that this is an important distinction (e.g. Shedler & Block, 1990). Each of the items were standardized and summed to generate a scale score for each of the four substance use categories and for total substance use. Each scale's internal consistency was tested with the Cronbach's (1951) alpha, α, test. Internal consistency alpha scores were found separately for each of the four substance categories and substance use overall (see Table 6).

Table 2: *Frequency of class cutting.*

n=1,756	Class cutting per month
Never	59.8%
1-2 times	19.4%
3-4 times	9.0%
Over 5 times	11.9%

Table 3: *Frequencies of substance use item #1*

n=1,756	Alcohol Use	Tobacco Use	Marijuana use	Other drug use
Never	55.7%	94.1%	71.6%	75.3%
Only at parties	22.8%	2.7%	7.0%	5.7%
Whenever	21.6%	3.2%	21.4%	19.0%

Table 4: *Frequencies of substance use item #2.*

n=1,756	Alcohol Use	Tobacco Use	Marijuana use	Other drug use
Never	62.4%	94.8%	72.9%	76.7%
Only at school	10.5%	2.0%	6.4%	5.0%
Whenever	27.1%	3.2%	20.7%	18.3%

Table 5. *Frequencies of substance use item #3.*

n=1,756	Alcohol Use	Tobacco Use	Marijuana use	LSD*, mushroom, or ecstasy use	Crank, crack, or cocaine use
Not at all	62.5%	74.0%	73.6%	95.7%	95.9%
Once or twice	19.9%	10.9%	9.7%	2.3%	2.0%
3-6 times	9.7%	3.6%	6.0%	1.0%	1.0%
7 or more times	7.8%	11.5%	10.7%	1.0%	1.1%

* Note: These two other drug variables were averaged together to construct the *other drug* score.

Table 6. *Cronbach alpha* levels from the combination of substance use items.*

Scale	Alpha Score
Alcohol	.889
Marijuana	.932
Hard Drugs	.885
Tobacco	.936
Total Substance Use	.773

* Note: Since the distributions of the three combined items were similarly skewed, the Cronbach alpha method might not be a valid test of inter-item association.

In addition to these the scales, a dichotomous variable coding was used for all problem behavior categories. This dichotomization was conducted in response to the skewed nature of the problem behavior data (see Table 3-5). For example, approximately 75 percent of the subjects responded *never* for all three of the tobacco use items. This distribution is clearly negatively skewed. Since many of the statistical methods employed in this study assume a normal distribution, it is important to use alternative methods to test the relationships between variables. Logistic reqression analysis, which does not assume normal distribution, predicts dichotomous data from continuous data. Thus, the problem behavior data was dichotomized for use in the additional testing of the hypothesized relationships.

Background variables

Background variables used were sex, grade level, ethnicity, and socioeconomic status (measured separately with three standardized items: free lunch eligibility, mother's education level, and father's education level; α=.554). These variables were chosen based on past research which has suggested that each of these variables might be significant moderators of the impact of EAP and connection (Richmond, 1985; McNeal, 1995; Steinberg et al.,

1987; Calabrese & Poe, 1990; Trusty et al., 1993; Hendrix et al., 1990).

There are several other influences that might need to be factored into a thorough study. For example, self-concept or mental ability could affect the structure of the proposed model. These variables, due to length limitations, are not measured in this survey. I will rely on other research which has demonstrated significant effects, even when these variables are statistically controlled (e.g. Spady, 1970; Otto & Alwin, 1979; Hanks & Eckland, 1979; Marsh, 1992; Jenkins, 1997; Gerber, 1996).

Analysis Plan

In order to test the significance of the hypothesized relationships, multiple regression equations were used. Moreover, a series of multiple regression equations* is the recommended procedure for testing mediation effects (Baron & Kenney, 1986).

EAP and problem behaviors: Pathway c (See Figure 2. Below)

Each problem behavior (*attendance* and *substance use*†) was separately regressed on extracurricular activity

---

* Both linear and logistic regression equations were employed.
† All four substance use categories (*alcohol*, *cigarettes*, *marijuana*, and other drugs) and total substance use were individually regressed.

participation (*sports, fine arts, in-school activities, out-of-school activities,* and *total extracurricular activity participation*). *Sex, SES, ethnicity,* and *grade level* were statistically controlled.

School connection and problem behaviors: Pathway b

Each problem behavior (*attendance* and *substance use*) was separately regressed on *school connection* (*commitment, power, belief, belonging* and total *school connection*). *Sex, SES, ethnicity,* and *grade level* were statistically controlled.

EAP and school connection: Pathway a

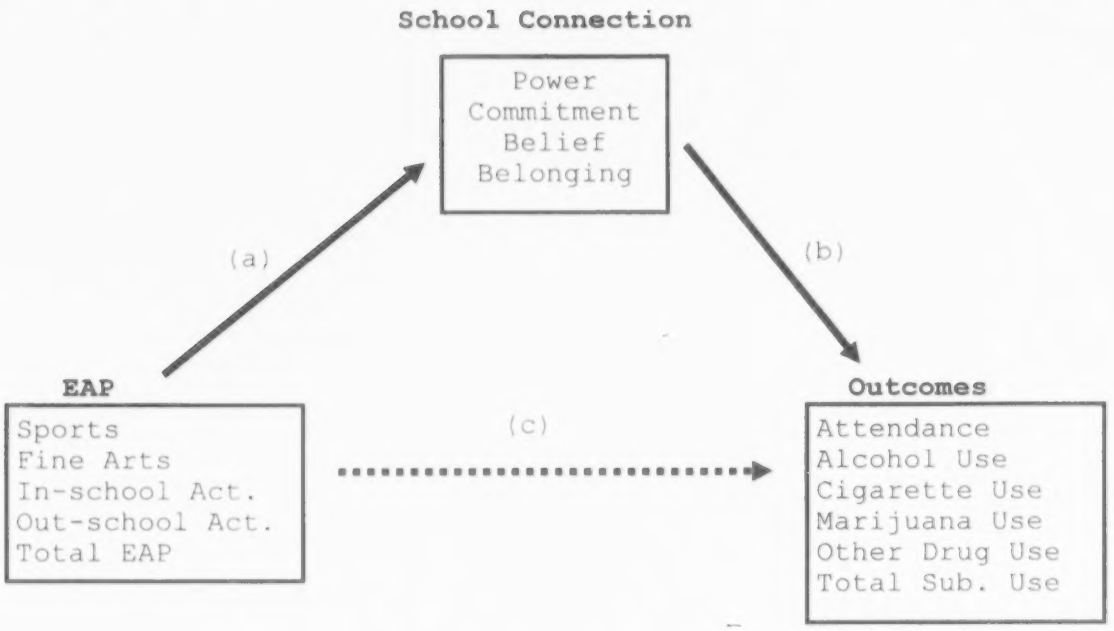
School connection was separately regressed on extracurricular activity participation (*sports, fine arts, in-school activities,* and *out-of-school activities*). *Sex, SES, ethnicity,* and *grade level* were statistically controlled.

EAP and problem behaviors mediated by connection: Testing of the strength of Pathway c

Each problem behavior (*attendance* and *substance use*) was separately regressed on extracurricular activity participation, while controlling for *school connection*.

Sex, *SES*, *ethnicity*, and *grade level* were also statistically controlled.

Figure 2. *Model for testing mediation effects of school connection.*



Chapter IV.

Results

School Connection

In order to test internal reliability of the proposed *school connection* construct, a Cronbach's alpha analysis was conducted using the two-district 1997 data. The analysis revealed an alpha level of .855 for the *school connection* variable.

The *school connection* construct, as it is offered in the present study, is founded upon elements drawn from previous literature. Although these elements have been found to be conceptually valid for a global sense of connection, I have proposed an original combination of items which is intended to measure these elements in relation to the school context. In order to test the internal validity of these proposed elements, a principal component factor analysis was conducted using an oblique rotation. Using a Kaiser-Guttman normalization, the analysis converged on three factors which explained 49.55 percent of the variance (see factor loadings in Table 7).

Table 7: *School connection factor matrix.*

	Factor Loadings*		
Item	Belief	Commitment	Belonging
Adults at this school listen to student concerns.	.836	-1.405E-02	-6.813E-02
Adults at this school act on student concerns.	.840	-.101	-7.211E-02
I have many opportunities to make decisions at my school.	.491	.206	5.876E-02
The principal asks students about their ideas.	.625	-8.608E-02	-1.774E-02
When there is an emergency there is someone there to help.	.497	-9.966E-02	.297
We do not waste time in my classes.	.359	.115	4.009E-02
Students of all ethnic groups are respected.	.391	3.771E-02	.258
The rules at my school are fair.	.551	.221	-9.471E-02
I am comfortable talking with adults at this school about my problems.	.575	5.183E-02	3.279E-02
I feel like I belong at this school.	9.416E-02	.114	.655
I have friends at this school.	-.164	1.500E-02	.779
I can be myself at this school.	9.234E-02	.114	.614
I can be a success at this school.	2.227E-02	.832	.109
I can reach my goals through this school.	-2.081E-02	.911	1.560E-02
My schoolwork helps in things that I do outside of school.	3.226E-02	.812	-3.229E-03
It pays to follow the rules at my school.	.465	.321	7.180E-03

* The highest factor loading for each item is underlined for clarity of presentation.

One of the proposed factors, *power*, seemed to merge with the *belief* factor. A student's *belief* about the legitimacy and function of school seems to be linked to his/her perceived *power* to discuss and affect change at the school. In addition, one item, *I am comfortable talking with adults at this school about my problems*, that was originally hypothesized to be a part of the *belonging* factor, was more congruous with the *belief* factor. This item seemed to fit with the more adult-oriented items of the *belief* factor. Aside from these adaptations, the resulting factor model is congruent with the one proposed in the previous chapter.

EAP and Problem Behaviors*

In an effort to test the relationship between extracurricular activity participation and problem behaviors, several sets of multiple regression equations were conducted using the 1997 data set. The first set of equations regressed problem behaviors on total extracurricular activity participation, (the combined hours of participation from all of the four activity categories),

* Please see Appendix H for a correlation matrix, which lists the Pearson's *r* coefficients of the variables included in the model.

while controlling for background variables (see results in Table 8)". Total extracurricular activity participation (TEAP) was significantly associated with lower use in all of the substance use categories, despite the statistical control of background variables. For example, TEAP ([β=-.149], t[1620]=-6.222, p<.000) was significantly associated with lower total substance use. The logistic equations revealed corresponding results. For example, TEAP (R=-.072, p<.000) was significantly associated with lower total substance use. TEAP was not, however, significantly associated with class cutting in either of the statistical analyses.

[·] In order to address the skewed distribution of the problem behavior data, logistic regression equations, which mirrored linear equations, were also conducted. For the logistic analysis, problem behaviors were dichotomized with *No Problem Behavior*=0 and *Problem Behavior*=1. Since no important differences were found between the two types of regressions, only linear regression results were displayed in table form.

[']Since the size of the current sample is substantial, *Beta* coefficients of less than .100 should be considered with caution. Conversely, if one assumes a multi-dimensional causal pattern, the statistical significance of a single factor of influence is noteworthy (Ahaldi & Diener, 1989).

Table 8. *Results from multiple regression equations predicting problem behaviors from TEAP after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
TEAP (ß)	-.135***	-.141***	-.122***	-.056*	-.149***	-.026
Grade (ß)	.282***	.224***	.259***	.099***	.290***	.430***
SES (ß)	-.006	.012	.002	-.021	-.001	-.051*
Sex (ß)	-.015	.013	-.054*	.018	-.013	-.028
Afr. (ß)	-.059*	-.130***	.026	-.002	-.083**	-.037
Asian (ß)	-.123***	-.043	-.100***	-.040	-.102***	-.046
Hisp. (ß)	.028	-.009	.003*	-.019	.005	.017
Other (ß)	-.040	.018	-.034	-.051	-.029	.008
Adj. R^2	.114	.073	.100	.015	.112	.187

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example non-Hispanic=0; Hispanic=1.*

Background variables

Although the background variables are not the variables of interest in this study, their relationship to problem behaviors is worth noting. In all of the regression equations predicting problem behaviors, a higher grade-level was associated with a greater degree of substance use and a greater amount of class cutting. This was particularly the case for class cutting ([ß=.430], $t[1620]=18.672$, $p<.000$). Lower socioeconomic status was

significantly related ([ß=-.051], t[1620]=-2.095, p<.036) to a greater degree of class cutting. Also, being male was significantly related ([b*=-.274], t[1605]=-2.339, p<.019) to greater marijuana use.

Asian-Americans, as compared to other respondents, reported significantly less alcohol ([b=-.921], t[1609]=-4.419, p<.000), marijuana ([b=-.699], t[1605]=-3.585, p<.000), and total substance ([b=-2.126], t[1611]=-3.672, p<.000) use. African-Americans, as compared to other respondents, reported less alcohol ([b=-.427], t[1609]=-2.089, p<.037), tobacco ([b=-.987], t[1608]=-4.544, p<.000), and total substance ([b=-1.679], t[1612]=-2.958, p<.003) use. These results were duplicated in the other regression equations that predicted problem behaviors.

Comparison of EAP categories

In order to test the predictive importance of each of the types of extracurricular activities, each EAP category (*Sports*, *Outside of School*, *Inside of School*, and *Fine Arts*) was separately entered into equations predicting problem behaviors. The results from these sets of equations are listed in Table 9 through Table 12. *Sports* participation was significantly associated with lower

* Unstandardized betas were reported for dichotomous variables.

tobacco ([ß=-.076], *t*[1621]=-4.689, *p*<.000), marijuana ([ß=-.076], *t*[1608]=-3.079, *p*<.002), other drug ([ß=-.058], *t*[1620]=-2.248, *p*<.025), and total substance use ([ß=-.094], *t*[1621]=-3.838, *p*<.000). The relationship between *sports* participation and alcohol use, however, did not reach significant levels. *Outside of school* participation was also significantly associated with lower substance use: alcohol ([ß=-.096], *t*[1561]=-4.022, *p*<.000), marijuana ([ß=-.101], *t*[1561]=-4.208, *p*<.000), tobacco ([ß=-.090], *t*[1602]=-3.673, *p*<.000), and total substance use ([ß=-.110], *t*[1621]=-4.608, *p*<.000). Tobacco ([ß=-.073], *t*[1563]=-2.928, *p*<.003), alcohol ([ß=-.065], *t*[1563]=-2.457, *p*<.014), marijuana ([ß=-.058], *t*[1602]=-2.348, *p*<.019), and total substance use ([ß=-.084], *t*[1621]=-3.435, *p*<.001) were significantly predicted by *inside of school* participation. Employing logistic equations, however, only alcohol use was significantly predicted by *inside of school* participation (*R*=.061, p<.000). Lastly, *fine arts* participation was significantly associated with lower alcohol ([ß=-.095], *t*[1563]=-3.933, *p*<.000), marijuana ([ß=-.064], *t*[1602]=-2.602, *p*<.009), tobacco ([ß=-.051], *t*[1622]=-2.071, *p*<.039), and total substance ([ß=-.074], *t*[1611]=-3.067, *p*<.002) use. As with the *total extracurricular activity participation* equation, no

participation category was significantly predictive of class cutting.

Table 9. *Results from multiple regression equations predicting problem behaviors from Sports participation after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Sports (ß)	-.048	-.103***	-.076**	-.058*	-.094***	-.013
Grade (ß)	.281***	.224***	.257***	.101***	.287***	.430***
SES (ß)	-.012	.012	.005	-.022	-.008	-.050*
Sex (ß)	-.030	.013	-.016	-.003	-.040	-.031
Afr. (ß)	-.049	-.130***	-.122***	-.099**	-.073*	-.035
Asian (ß)	-.108***	-.043	-.033	-.038	-.089**	-.042
Hisp. (ß)	.044	-.009	.004	-.026	.018	.020
Other (ß)	-.025	.018	.029	-.044	-.013	.014
Adj. R^2	.098	.073	.092	.015	.101	.186

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 10. *Results from multiple regression equations predicting problem behaviors from Outside of School participation after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Outside (ß)	-.096***	-.090***	-.101***	-.049	-.110***	-.043
Grade (ß)	.292***	.235***	.271***	.110***	.305***	.431***
SES (ß)	-.015	.002	-.007	-.027	-.012	-.052*
Sex (ß)	-.017	.009	-.059*	.011	-.018	-.026
Afr. (ß)	-.057*	-.129***	.027	-.103**	-.082**	-.037
Asian (ß)	-.114***	-.032	-.094**	-.036	-.092**	-.045
Hisp. (ß)	.026	-.013	-.003	-.038	.003	.017
Other (ß)	-.036	.026	-.030	-.048	-.022	.008
Adj. R^2	.105	.062	.097	.014	.104	.186

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 11. *Results from multiple regression equations predicting problem behaviors from Inside of School participation after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Inside (ß)	-.099***	-.073**	-.058*	-.009	-.084**	-.012
Grade (ß)	.288***	.229***	.265***	.103***	.298***	.428***
SES (ß)	-.010	.004	-.001	-.018	-.006	-.048*
Sex (ß)	.002	.025	-.045*	.021	.001	-.025
Afr. (ß)	-.053	-.123***	.029	-.104**	-.077**	-.033
Asian (ß)	-.116***	-.031	-.095**	-.038	-.092**	-.044
Hisp. (ß)	.042	.009	.019	-.010	.023	.023
Other (ß)	-.039	.021	-.035	-.065*	-.030	.011
Adj. R^2	.105	.057	.090	.014	.099	.184

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 12. *Results from multiple regression equations predicting problem behaviors from Fine Arts participation after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Arts (ß)	-.095***	-.051*	-.064**	-.005	-.074**	-.012
Grade (ß)	.280***	.223***	.262***	.105***	.292***	.427***
SES (ß)	-.011	.004	-.008	-.028	-.010	-.051*
Sex (ß)	-.012	.009	-.059*	.011	-.016	-.026
Afr. (ß)	-.055	-.124***	.028	-.100**	-.079**	-.034
Asian (ß)	-.116***	-.030	-.094**	-.036	-.092**	-.045
Hisp. (ß)	.022	-.001	-.001	-.025	.003	.017
Other (ß)	-.036	.028	-.032	-.047	-.022	.010
Adj. R^2	.102	.055	.091	.012	.096	.184

** p<.05; ** p<.005; *** p<.000.*
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

EAP and School Connection

In order to test the relationship between extracurricular activity participation and *school connection*, two sets of multiple regression equations were conducted, again using the two-district sample. Firstly, *school connection* was regressed on *total extracurricular activity participation*, while controlling for background variables (see Table 13). TEAP was indeed significantly

associated with greater *school connection* ([ß=.085], *t*[1625]=3.446, *p*<.001).

Table 13. *Results from a multiple regression equation predicting School Connection from TEAP after controlling background variables.*

	School Connection
TEAP (ß)	.085**
Grade (ß)	-.197***
SES (ß)	.039
Sex (ß)	.077**
Afric. (ß)	.040
Asian (ß)	.072*
Hisp. (ß)	.056
Other (ß)	.036
Adj. R^2	.052

* *p*<.05; ** *p*<.005; *** *p*<.000.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example non-Hispanic=0; Hispanic=1.*

Background variables

The equations predicting *school connection* revealed several interesting associations with background variables. For example, grade level ([ß=-.197], *t*[1625]=-7.967, *p*<.000) was negatively associated with a greater degree of *school connection*. Female students ([*b*=6.934E-02],

t[1625]=3.156, *p*<.002) had a greater level of *school connection* as compared to male students. Lastly, Asian-American students ([*b*=9.189E-02], *t*[1625]=2.513, *p*<.012) seemed to have a higher level of *school connection* as compared to other ethnicities. These results were duplicated in other equations that predicted *school connection*.

Comparison of EAP categories

The second set of equations regressed *school connection* individually upon each extracurricular activity category (see Table 14-17). As separate categories of activities, only *sports* ([ß=.069], *t*[1567]=2.752, *p*<.006) and *outside of school* ([ß=.051], *t*[1567]=2.076, *p*<.038), participation were significantly predictive of greater *school connection*. The other activity categories failed to reach significant levels.

Table 14. *Results from a multiple regression equation predicting School Connection from Sports participation after controlling background variables.*

	School Connection
Sports (ß)	.085**
Grade (ß)	-.193***
SES (ß)	.044
Sex (ß)	.096***
Afric.(ß)	.035
Asian (ß)	.067*
Hisp. (ß)	.055
Other (ß)	.036
Adj. R^2	.051

* p<.05; ** p<.005; *** p<.000.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 15. *Results from a multiple regression equation predicting School Connection from Outside of School participation after controlling background variables.*

	School Connection
Outside (ß)	.051*
Grade (ß)	-.200***
SES (ß)	.047
Sex (ß)	.082**
Afric.(ß)	.037
Asian (ß)	.062*
Hisp. (ß)	.061*
Other (ß)	.032
Adj. R^2	.048

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 16. *Results from a multiple regression equation predicting School Connection from Inside of School participation after controlling background variables.*

	School Connection
Inside (ß)	.038
Grade (ß)	-.200***
SES (ß)	.044
Sex (ß)	.074**
Afric.(ß)	.043
Asian (ß)	.065*
Hisp. (ß)	.045
Other (ß)	.037
Adj. R^2	.046

* p<.05; ** p<.005; *** p<.000.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Table 17. *Results from a multiple regression equation predicting School Connection from Fine Arts participation after controlling background variables.*

	School Connection
Fine Arts (ß)	.038
Grade (ß)	-.197***
SES (ß)	.045
Sex (ß)	.077**
Afric.(ß)	.036
Asian (ß)	.063*
Hisp. (ß)	.056
Other (ß)	.035
Adj. R^2	.047

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

School Connection and Problem Behaviors

Multiple regression equations were also employed to test the relationship between *school connection* and problem behaviors. The first set of equations regressed problem behaviors upon the aggregate *school connection* variable, while controlling for background variables (see Table 18). *School connection* was significantly associated with lower levels of all of the problem behaviors examined. For

example, *school connection* was significantly ([ß=-.279], *t*[1628]=-11.978, *p*<.000) associated with lower total substance use. This strong relationship was also found in the logistic equations. Unlike EAP, *school connection* was also significantly associated with less class cutting ([ß=-.154], *t*[1614]=-6.805, *p*<.000).

Table 18. *Results from multiple regression equations predicting problem behaviors from School Connection after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
School Connection (ß)	-.264***	-.168***	-.228***	-.243***	-.279***	-.154***
Grade (ß)	.226***	.188***	.212***	.050*	.232***	.402***
SES (ß)	-.006	.003	-.001	-.012	-.003	-.045
Sex (ß)	.001	.026	-.039	.034	.006	-.017
Afric. (ß)	-.038	-.113***	.042	-.089***	-.062*	-.029
Asian (ß)	-.088**	-.015	-.071**	-.018	-.066*	-.032
Hisp. (ß)	.065*	.021	.032	.000	.042*	.028
Other (ß)	-.015	.043	-.011	-.039	-.001	.015
Adj. R^2	.161	.079	.132	.068	.163	.210

* *p*<.05; ** *p*<.005; *** *p*<.000.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Comparison of School Connection Factors

The second set of equations regressed problem behaviors simultaneously upon the separate *school connection* factors, *belief*, *commitment*, and *belonging* (see Table 19). While *commitment* and *belief* were significantly associated with lower substance use, *belonging* did not reach significance. For example, lower total substance use was significantly associated with both *belief* ([ß=-.199], $t[1374]=-7.024$, $p<.000$) and *commitment* ([ß=-.147], $t[1374]=-5.336$, $p<.000$). This pattern of association was consistent across all of the problem behavior categories except other drugs. *Belief* ([ß=-.130], $t[1364]=-4.676$, $p<.000$) and *commitment* ([ß=-.082], $t[1364]=-3.031$, $p<.000$) were also associated with lower levels of class cutting. These findings were duplicated by logistic regression results.

Table 19. *Results from multiple regression equations predicting problem behaviors from School Connection Factors after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Belong. (ß)	-.001	-.005	-.024	-.112***	-.031	.012
Commit. (ß)	-.147***	-.091***	-.159***	-.046	-.147***	-.082***
Belief (ß)	-.199***	-.130***	-.134***	-.182***	-.199***	-.130***
Grade (ß)	.215***	.169***	.199***	.038	.214***	.388***
SES (ß)	-.004	.012	-.002	-.023	-.002	-.047
Sex (ß)	.004	.038	-.042	.031	.010	-.004
Afric. (ß)	-.017	-.113***	-.054	-.079**	-.048	-.018
Asian (ß)	-.090**	-.024	-.079**	-.036	-.074**	-.032
Hisp. (ß)	.082**	.026	.045	.000	.054	.018
Other (ß)	-.010	.031	-.015	-.041	-.005	-.009
Adj. R^2	.174	.080	.142	.076	.172	.205

* $p<.05$; ** $p<.005$; *** $p<.000$.
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example non-Hispanic=0; Hispanic=1.*

EAP and Problem Behaviors Controlling for School Connection

In order to test the proposed mediation model, which hypothesizes that the relationship between EAP and problem behaviors is mediated by *school connection*, a final set of regression equations were conducted. This final set regressed problem behaviors on extracurricular activity participation while controlling for both *school connection*

and background variables. Since it is hypothesized that part of the effect of EAP upon problem behaviors is due to EAP's effect upon *school connection*, the inclusion of *school connection* is hypothesized to reduce the strength of the relationship between EAP and problem behaviors. This reduction in strength was measured by comparing the *Beta* coefficients from equations predicting problem behaviors from EAP and those equations predicting problem behaviors from EAP, while controlling for *school connection* (see Table 19).

Dividing the Beta coefficients of the reduced model by the full model, revealed a slight reduction in the power of total extracurricular activity participation. TEAP *Betas* were reduced by 16 percent in the equation predicting total substance use; 9 percent in tobacco use; 15 percent in marijuana use, 36 percent in other drug use; and 16 percent in total substance use (see Table 20). Although the reduction in the TEAP *Betas* in the class cutting equation was large (50%), the relationship between EAP and class cutting was not initially significant, and thus cannot be considered in a mediation analysis (Baron & Kenney, 1986). These and the other results will be discussed in detail in Chapter V.

Table 20. *Results from multiple regression equations predicting problem behaviors from TEAP after controlling school connection and background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub.Use	Class Cutting
TEAP (ß)	-.114***	-.129***	-.104***	-.036	-.127***	-.014
S.Conn. (ß)	-.255***	-.153***	-.216***	-.239***	-.265***	-.154***
Grade (ß)	.231***	.194***	.216***	.051	.237***	.400***
SES (ß)	.005	.018	.011	-.011	.010	-.045
Sex (ß)	.004	.025	-.039	.036	.007	-.016
Afrc. (ß)	-.049	-.124***	.035	-.092***	-.072**	-.030
Asian (ß)	-.105***	-.032	-.085***	-.024	-.083***	-.035
Hisp. (ß)	.042	-.001	.015	-.006	.019	.025
Other (ß)	-.032	.023	-.027	-.043	-.020	.014
Adj. R^2	.179	.094	.143	.069	.179	.209
Percent Reduction	16%	9%	15%	36%	16%	Ø

* p<.05; ** p<.005; *** p<.000.

Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

Chapter V.

Discussion

The results detailed in Chapter IV reveal several significant patterns. Although the proposed model was not supported fully by the current study, parts of the model were supported quite strongly. Extracurricular activity participation was found to have a significant association with a lower likelihood of substance use. A strong relationship also was found between extracurricular activity participation and a sense of *school connection*. Lastly, *school connection* was significantly associated with a decreased likelihood of problem behavior. In the following sections, these results will be discussed in greater detail.

Limitations

Prior to any interpretation of results, several of this study's methodological and design weaknesses need to be revisited. First, the analyses were conducted using cross-sectional data. The current sample was composed of subjects who were anonymously surveyed at one point in time. Thus, any statistical associations cannot be determined to be causal. For example, this study found a

strong relationship between extracurricular participation and decreased substance use. Due to the nature of the design, it cannot be concluded that participation in extracurricular activities decreases the likelihood of substance use.

In addition to this weakness, this study was based entirely on a sample of youth whose parents completed consent forms. It is likely that the students who returned these forms were less "at risk" than those who did not. Accordingly, the present sample might be composed of more prosocial youth than the overall youth population. Together, these weaknesses warrant caution when gleaning any conclusions from the current results.

Extracurricular Activity Participation

This study found that the total number of hours participating in activities was negatively associated with substance use. These results held after the statistical control of various background variables (sex, socioeconomic status, ethnicity, and grade level). This finding is consistent with substantial cross-sectional (Feltz & Weis, 1984; Landers & Landers, 1978; Cooley et al., 1995) and longitudinal (Mahoney & Cairns, 1997; Otto & Alwin 1977; McNeal, 1995; Marsh 1992; Hanks & Eckland, 1976) research,

which has found that extracurricular activity participation is related to prosocial behavior. This study lends further support to the hypothesis that EAP is a source of prosocial influence in the lives of youth.

In contrast to this contention, this study found that the number of times a student reported cutting class was not significantly related to extracurricular participation. This finding is contrary to other cross-sectional and longitudinal studies, which have found a strong relationship between EAP and improved attendance (Marsh 1992; McNeal, 1995; Mahoney & Cairns, 1997). There are two likely explanations for this inconsistency: 1) The class cutting variable used in this study may not have adequately assessed the variability of truancy; 2) The class cutting variable may also not be equivalent to the attendance measures used in other studies. There might be a difference between a student's daily attendance pattern and the number of classes he/she reports cutting. In most other studies, however, attendance and class cutting have demonstrated a strong negative relationship (Roderick, 1993).

In addition to testing the relationship between total hours of participation and problem behavior, similar analyses were conducted using individual activity

categories (*sports*, *fine arts*, *inside-of-school*, and *outside-of-school*). As with the total number of participation hours, none of the categories were significantly related to class cutting. *Sports* participation was predictive of lower substance use for all substance categories except alcohol. This finding is consistent with a recent study which examined the relationship between EAP and substance use (Cooley et al., 1995). Cooley and colleagues maintained that the culture of athletics is such that it actively discourages the use of drugs while acquiescing to the use of alcohol.

Activity participation outside of the school setting was found to be a strong predictor of a lower degree of substance use. Unfortunately, very little empirical research has investigated the impact of outside of school activities as a group. According to this study, the importance of these types of activities rivals that of sports participation. It seems that activities outside of school might have a marked influence upon the decision-making of youth participants. Future research examining the impact of activities outside of the school setting is greatly needed.

Inside-of-school and *fine art* activity participation were also associated with reduced substance use. These

activity categories, however, did not seem to be as strongly predictive as *sports* and *outside of school* participation. Further, several of the logistic regression equations predicting substance use from *inside-of-school* and *fine arts* participation did not yield significant results. McNeal (1995) similarly found that both *fine arts* and *academically-focused* extracurricular participation had only a negligible effect on school dropout. In contrast, other authors have found that participation in non-athletic activities is a greater predictor of academic and social outcomes than athletic activities (Gerber, 1996; Hanks & Eckland, 1976; Landers et al., 1976; Spady, 1970). Still other authors have found that there are no differences between types of activities and their effect on youth behavior (Hanesly et al., 1986; Feltz & Weis, 1984; Landers & Landers, 1978).

This survey of the literature does not seem to reveal a discernable pattern. Holland and Andre (1987), however, in attempting to synthesize the EAP literature, suggest that there *are* patterns explaining why some activities are more strongly associated with prosocial behavior. These patterns, they argue, have been overlooked and understudied. Future research needs to assess more carefully the characteristics of an activity and determine

the relative importance of individual characteristics in predicting prosocial outcomes. This study was an initial, albeit limited, attempt to distill a greater understanding of the EAP process.

This study, as is typical of EAP literature, is limited by the self-selection process of the participant group. Individual youth that participate in activities make a voluntary decision to participate. In addition, much of the time these youth have to be emotionally, financially, or physically able to participate. Thus, those who chose to participate in activities are more likely to be capable and well integrated students. One might argue that it is no surprise that EAP is associated with a greater level of prosocial behavior, since youth who participate already have greater prosocial inclinations. Several longitudinal studies have sought to address this limitation by initially controlling for socioeconomic status, academic ability, and behavioral competence (e.g. Otto & Alwin, 1977; Marsh 1992; Mahoney & Cairns, 1997; Marsh, 1992). After statistically controlling for such factors, these authors have nevertheless found a significant association between EAP and prosocial behavior. Moreover, the relationship between participation and prosocial behavior seemed to be at its strongest with

groups of students who were initially designated as "at risk" (Mahoney & Cairns, 1997; Hanks & Eckland, 1976; Spady, 1970, Snyder, 1969). Cross-sectional research has found that most students who participate in activities are of a higher academic and socioeconomic level as compared to non-participants (Haensly et al., 1986; Holland & Andre, 1987). What participation may offer is a prosocial setting for socialization of both youth who already have prosocial inclinations and those who do not (Mahoney & Cairns, 1997; Landaus et al., 1978; Holland & Andre, 1987). Although the majority of youth who participate in activities may not be highly "at risk", the minority who are may benefit greatly from the socialization opportunities available through participation.

In sum, participation in extracurricular activities seems to be related to prosocial attitudes and behaviors. Combined with existing research, a strong case can be made that EAP encourages prosocial behavior, particularly for youth who are vulnerable to problem behaviors. Greater study, however, is needed to examine the characteristics of a successful extracurricular activity.

School connection

The concept of *school connection* has a rich but disparate intellectual history. As such, this study reviewed the different theoretical treatments of connection with the purpose of creating an original construct which integrates elements from respective treatments while focusing on the *school* context. Four elements were drawn from the respective theoretical traditions to form an original construct, *school connection*. The elements, *belief*, *power*, *commitment*, and *belonging* were not fully validated by the present data. A factor analysis found that the *power* and *belief* factors merged together to form a single factor. It appears that a youth's *belief* about the legitimacy and function of school is intertwined with his/her perception of *power* within it. Said another way, a youth's perception of his/her ability to affect change figures prominently in how he/she views school as a legitimate, well functioning institution.

The high degree of cohesion found within three of the four *school connection* factors supports existing research which has demonstrated reliability with similar factors (Fetro & Vitello, 1988; Dean, 1961; Fetro, 1985; Neal & Rettig, 1967). This research, however, has measured alienation or bonding largely as a global phenomenon. The

current study's findings suggest that these factors might also be stable and appropriate in context-specific considerations of connection. This study also answers educational researchers who have called for the empirical study of the *school connection* construct (Finn, 1989; Deci et al., 1991; Wehlage et al., 1989).

Even though the results were, generally, consistent with the proposed categories, the factor analysis seemed to suggest the need for further distinctions among the elements of *school connection*. One particular item, *I am comfortable talking with adults at this school about my problems*, did not load on the *belonging* factor as proposed (see Table 7). Since this item diverges from the other *belonging* items by specifying adult social support, it appears that youth view adult social support in the context of school as distinct from overall school *belonging*. Thus, although students' sense of school functioning and their sense of non-adult social belonging are highly related and conceptually united, these factors seem to be distinct.

In order to strengthen this *school connection* scale, future research should compose additional *belonging* and *commitment* items to bolster existing items. In addition, there are several items that loaded on the *Belief/Power* factor, which do not strongly contribute to the factor's

cohesion (see Table 7). For example, items such as, *I have many opportunities to make decisions at my school*, which do not seem to load strongly on any factor should be eliminated. Aside from these modifications, the *school connection* scale and its respective elements can be a useful measure for future studies examining how a youth understands his/her relationship to school.

In the present study, *school connection* scores were found to be strongly associated with decreased levels of problem behaviors. This finding was consistent across problem behavior categories and held after background variables were statistically controlled. This finding augments a growing literature suggesting that a youth's sense of connection is predictive of his/her behavior. (Calabrese & Adams, 1990; Khron et al., 1983; Reid 1981; Burbach, 1972; Moyer & Motta, 1982; Jenkins, 1997; Battistich & Hom, 1997; Finn & Rock, 1997). Thus, how a youth understands his/her relationship with school might be influential in his/her decision-making both inside and outside of school.

Analysis that independently examined the elements of *school connection* revealed that *belief/power* and *commitment* were important predictors of lower levels of youth problem behaviors. This finding is consistent with research that

has found these factors to be related to more prosocial behavior patterns (Hirshi, 1969; Calabrese & Adams, 1990; Khron et al., 1983; Reid 1981; Burbach, 1972; Moyer & Motta, 1982; Jenkins, 1997; Battistich & Hom, 1997; Finn & Rock, 1997). For example, Khron and colleagues (1983) found that the social control factors, *commitment* and *belief*, were predictive of a lower likelihood of future smoking behavior, while *attachment* (a concept similar to *belonging*) failed to significantly predict smoking.

Similarly in the present study, *belonging* was not found to contribute uniquely to the prediction of problem behaviors. This finding is contrary to some research, which has found a significant relationship between school *belonging* and attendance as well as school *belonging* and school success (Goodenow & Grady, 1993; Jenkins, 1997). School *belonging* as a construct rests on the supposition that a learner's performance is enhanced when a learner feels as if they socially belong (Rogoff, 1990; Goodenow 1993a; Deci et al., 1991). A sense of belonging, then, might not be important as a predictor of social behaviors outside of the learning environment. More likely though, because all of the *school connection* factors were highly correlated (see Appendix H), colinearity may have diminished the effect of *belonging*. Post hoc analysis,

which predicted problem behaviors using solely *belonging* and background variables, found *belonging* to be a significant predictor of all of the problem behaviors tested (see Appendix I). Thus, *belonging* might be important but not over and above the other two *school connection* factors. Conversely, the other two factors, *commitment* and *belief/power*, seem to be important factors independently.

The current model and the existing theoretical and empirical literature suggest that a youth's sense of *school connection* discourages his/her likelihood of developing a problem behavior profile. This directionality, however, cannot be determined from the current sample. Furthermore, this author's interpretation of the results may also neglect nonrecursive reciprocal effects. For example, substance use might contribute to a decreased sense of *school connection* (Thornberry, 1987). This lower sense of connection might in turn contribute to a greater likelihood of problem behavior. Although the present study's data set and methods are not adequate to test for recursive effects, it is nonetheless important to recognize their potential impact on the hypothesized relationships.

In sum, this study supports the efficacy of the *school connection* construct. Moreover, *school connection* and its

elements are highly related to problem behaviors. As theorists from several different traditions have maintained, a sense of *connection* seems to influence a youth's process of choosing whether or not to habitually conduct him/herself in an antisocial fashion. This study supports an accumulating body of research contending that a youth's sense of connection to a prosocial institution is an important factor in the problem behavior model*.

School Connection Mediation Model

The proposed model, which predicts that *school connection* mediates the relationship between EAP and problem behavior, was not validated by the current study. The mediation analysis revealed only a slight effect, approximately a 15 percent reduction across behaviors. This reduction does not strongly support the hypothesis that the prosocial effect of participation is due solely to an increase in *school connection*. This study's results suggest that either *school connection* and EAP are independent influences, *or* only a slight portion of the effect of EAP might be due to an increase in *school connection*. Clearly, there are other factors that mediate

* Since the present study is concerned primarily with EAP and *school connection* variables, a brief discussion of the sociodemographic findings has been deferred to Appendix J.

the impact of EAP. It may be the case that several factors like *school connection*, academic *self-concept*, and positive peer affiliation interact together to mediate the impact of extracurricular activity participation.

It remains important then to conduct research on additional mediators of activity participation. The conceptual design employed in this study to test the proposed model can be useful to other researchers testing other hypothesized mediators. This future research should apply more complex structural modeling, which might simultaneously test potential mediators. For example, future research should include factors such as *academic self-concept* or *positive peer influence* to further explore the process of EAP impact.

Extracurricular activities represent one setting or context in the lives of developing youth. Other peer groups or family settings are also powerful sources of socialization and profoundly influence decision-making around social behaviors. Although the present study and existing literature strongly suggest that participation in extracurricular activity social *units* positively influences attitudes and behavior, future research needs to investigate the importance of EAP relative to other social contexts.

According to Hawkins and Weis (1985), the focus of prevention efforts should be on developing socialization opportunities which increase a youth's sense of connection to prosocial institutions. Research suggests that *all* contexts or *units* of socialization should be targets for prevention programming because deficits in one context can be compensated for by prosocial socialization experiences in other contexts (Barber & Olsen, 1997; Rutter, 1990; Werner & Smith, 1992). During adolescence, extra-familial socialization settings become increasingly important in the lives of youth (Hawkins & Weis, 1985; Calabrese, 1987; Brofenbrenner, 1974). Thus, particularly for adolescents, extra-familial, prosocial socialization opportunities, (regardless of whether or not they are extracurricular activities), are an important source of influence for developing youth.

Implications

This study contributes to an expanding literature, which suggests that participation in extracurricular activities encourages prosocial behavior. Those who offer activities of this kind can argue quite strongly that research supports the efficacy of participation. Based on the results of the current study, it appears that each hour

a youth participates in an extracurricular activity can decrease his/her likelihood of substance use. Certainly one should not expect a transformation of those youth who choose to participate in extracurricular activities. Rather, participation can be considered to be one viable protective factor in the lives of developing youth.

A yet unanswered question is how these activities should be structured in order to have the greatest impact on the lives of youth. Although this study has not conclusively proven that the impact of EAP is due to a greater sense of connection, it has been strongly suggested that any program or activity that can increase a youth's sense of connection can influence a youth's decision-making around problem behaviors (Battistich & Hom, 1997; Finn & Rock, 1997). Positive social interactions and experiences can shape his/her view of school, thus discouraging contrary behavior. Further research needs to be conducted that evaluates which activities and methods in particular are most likely to encourage *school connection*.

Traditionally, problem behaviors in and out of school have been hypothesized as deficiencies in an individual youth or his/her family background. Evidence is accumulating, however, that another important variable in the problem behavior formula might be the interaction of

the individual and the school context (Jenkins, 1997; Eccles, Lord & Roeser, 1996; Wehlage et al., 1989; Goodenow & Grady, 1993; Finn & Rock, 1997). This interaction informs an internal understanding which can steer a youth's learning and social behavior. Although it is difficult to re-formulate the educational environment, *school connection* appears to be an important factor in both the social and educational performance of students (Newman, 1981). Schools and youth programs need to work towards creating an environment that is more conducive to student connection (Wehlage et al., 1989; Kagan, 1990). Although further research is needed to extend the importance of *school connection*, schools and youth programs should begin the process of program and policy adjustment toward a more embracing social environment.

School district number one provides an illustration of how a district can respond to school connection issues. In 1993, a large percentage of the student body in district number one did not feel as if all ethnicities were equally respected. The district responded by conducting staff and student workshops on cultural diversity. In addition, the district administration has pursued a more active discipline policy toward any discriminatory conduct by students. Lastly, activities that celebrated cultural

traditions were conducted. Over the past three years, the number of students who feel as if ethnicities are not treated equally has significantly and steadily decreased (Duckert & Brown, 1998). Although it cannot be determined that these practices and policies have caused the reduction, it can be stated that these district-wide changes may have contributed to the related change in student attitudes. This is the type of active, concerted effort that is needed to address students' feelings of school connection.

Newman (1981) recommended six strategies for improving a student's sense of connection to his/her school: *voluntary choice*, having options available to students in which to exert some control over the learning and environmental circumstances; *clear and consistent goals*, having students understand and accept the school's goals; *small size*, having smaller settings for learning; *participation*, having students participate in all aspects of schooling; *extended and cooperative roles*, having students be involved in roles where they assist teachers and staff in the instructional process; and *integrated work*, having students involved with projects that they feel are important and meaningful. Finn (1989) has recommended some more specific suggestions such as: personalized

advising, flexible scheduling, individualized programming, and participation in governance. These strategies, while largely not empirically tested, are likely to foster greater student connection.

A change in the structure of the school environment, although important, will not guarantee that students will become more connected to the school. One's sense of *school connection* is a complex developmental phenomenon. Each youth has preexisting conceptions about school and his/her relationship to it, all of which have been shaped by an individual developmental trajectory. Furthermore, other contextual sources can influence his/her sense of connection. Thus, a youth's sense of connection is reflective of the school environment but is colored by his/her own *school connection* cognitions. While expecting total preventative success through changes in the school or program environment may be laudable, it also may be unrealistic.

Poplin and Wheeres (1994) suggest that the most important factor in a youth's connection with his/her school is the interactional style of staff and faculty. Based on their research, they suggest that adults who respect and value youth, and who convey these tenets in their interaction with youth do the most toward creating a

school environment which encourages connection. Certainly, the current classroom configuration is not organized around creating opportunities for this type of interaction (Whelage et al., 1989). Nevertheless, it might be important to re-emphasize the value of interacting with youth in a way that encourages a greater sense of *school connection* (Whelage et al., 1989).

These recommendations, although targeted to the school setting, also might be useful to those designing youth programs of any kind. Programs for youth, if they are to be more effective, can and should be structured to provide for interactions that encourage connection. This orientation shift might be applicable to the entire spectrum of youth programming.

Students who do not feel connected to school achieve lower grades, attend school less, dropout earlier, have more disciplinary problems, and behave more antisocially. Future research directions should be organized around uncovering particular factors that encourage *school connection*. Studies should be structured to inform youth programming as well as the empirical and theoretical literature. This means testing the capacity of programming or program methods to contribute to a youth's sense of *school connection*. This future research might assist those

offering youth programming to contribute, to a greater degree, to the positive development of youth.

REFERENCES

Ahadi, S. & Diener, E. (1989). Multiple determinants and effect size. *Journal of Personality and Social Psychology*, **56**, 398-406.

Akers, R. (1977). *Deviant behavior: A social learning perspective*. Belmont, CA: Wadsworth.

Alley, L. (1974). Athletics in Education: The Double-edged sword. *Phi Delta Kappan*, **56**, 102-105.

Barber, B. & Olsen, J. (1997). Socialization in Context: Connection, regulation, and autonomy in the family, school, and neighborhood, and with peers. *Journal of Adolescent Research*, **12**, 287-315.

Baron, R., & Kenney, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, **51**, 1173-1182.

Battistich, V., & Hom, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health*, **87**, 1997-2001.

Beneke, J. (1970). A study of the relationship of alienation to selected academic and behavioral variables in a high school student population. *Dissertation Abstracts International*, **31**, 4404A.

Berndt, T. (1979). Developmental changes in conforming to parents and peers. *Developmental Psychology*, **15**, 608-616.

Brofenbrenner, U. (1974). The origins of alienation. *Scientific American*, **261**, 53-61.

Brown, B. (1988). The vital agenda for research on extracurricular influences: A reply to Holland and Andre. *Review of Educational Research*, **58**, 107-111.

Brown, R., & Dean, L. (1997) What do youth want? *Journal of Extension*, **36**.

Burbach, H. (1972). An empirical study of powerlessness among high school students. *High School Journal*, **55**, 343-354.

Burbach, H. (1978). The development of a contextual measure of alienation. *Pacific Sociological Review*, **15**, 225-234.

Calabrese, R. (1987). Adolescence: A growth period conducive to alienation. *Adolescence*, **22**,929-938.

Calabrese, R., & Adams, J. (1990). Alienation: A cause of juvenile delinquency. *Adolescence*, **98**, 435-439.

Calabrese, R., & Poe, J. (1990). Alienation: An explanation of high dropout rates among African-American and Latino students. *Educational Research Quarterly*, **14**, 22-26.

Calabrese, R., & Seldin, C. (1986). Adolescent alienation: An analysis of the female response to the secondary school environment. *High School Journal*, **82**, 120-125.

Carnegie Council of Adolescent Development (1995). *Great transitions: Preparing adolescents for a new century*. NY: Carnegie Corporation.

Cloward, R., & Ohlin, L. (1960). *Delinquency and opportunity*. Glencoe, IL: Free Press.

Cohen, A. (1955). *Delinquent boys: The culture of the gang*. Glencoe, IL: Free Press.

Cooley, V., Henriksen, L., Nelson, C., & Thompson, J. (1995). A study to determine the effect of extracurricular participation on student alcohol and drug use in secondary schools. *Journal of Alcohol and Drug Education*, **40**, 71-87.

Cornell, J., & Wellborn, J. (1990). Competence, autonomy, and relatedness: A motivational analysis of self-esteem processes. In M. Gunnar & A Sroufe (eds.), *Minnesota symposium of child psychology*, Vol. **23**, pp. 43-77. Hillsdale, NJ: Lawrence Erlbaum.

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrica*, **16**, 297-334.

Dean, D. (1961). Alienation: Its meaning and measurement. *American Sociological Review*, **26**, 753-758.

Deci, E., Vallerand, R., Pelletier, L., & Ryan, R. (1991). Motivation and education: the self determination perspective. *Educational Psychologist*, **26**, 325-346.

Denise, J. (1973). The concept of alienation and some historical notices. In F. Johnson, *Alienation: Concept, term, and meanings*, (Ed.), pp.55-89. New York: Seminar Press.

Duckert, K., & Brown, R. (1998) *1998 Survey report*. Mount Diablo Unified School District.

Dunkin, M., & Biddle, B. (1974). *The study of teaching*. New York: Holt, Rinehart and Winston.

Dworkin, A. (1987). *Teacher burnout in the public schools*. Albany: State University of New York Press.

Eccles,-J., Lord,S. & Roeser, R. (1996). Round holes, square pegs, rocky roads, and sore feet: The impact of stage-environment fit on young adolescents' experiences in schools and families. In D. Cicchetti, Dante and S. Toth, *Adolescence: Opportunities and challenges* (Ed.), pp. 47-92. Rochester, NY: University of Rochester

Elliot, D. & Voss, H. (1974). *Delinquency and dropout*. Lexington, Mass.: Heath.

Elliot, D., Huizinga, & Ageton, S. (1985). *Explaining delinquency and drug use*. Beverly Hills: Sage.

Fagan, J. (1990). Social processes of delinquency and drug use among urban gangs. In C. Huff, *Gangs in America*, (Ed.), pp.183-222. Newbury Park, CA: Sage.

Farber, B. (1984). Stress and burnout in suburban teachers. *Journal of Educational Research*, **77**, 325-331.

Feldlaufer, H., Midgley, C., & Eccles, J. (1988). Student, teacher, and observer perceptions of the classroom environment before and after the transition to junior high school. *Journal of Early Adolescence*, **8**, 133-156.

Feltz, D., & Weiss, M. (1984). The impact of girls' interscholastic sport participation on academic orientation. *Research Quarterly for Exercise and Sport*, **55**, 332-339.

Fetro, J. (1985). *Development of an instrument to measure feelings of alienation in adolescents, ages 10-14.* Unpublished master's thesis. Southern Illinois University. Carbondale, IL.

Fetro, J. (1987). *Adolescent alienation: Verifying a web of causation through path analysis.* Dissertation: Southern Illinois University at Carbondale.

Fetro, J., & Vitello, E. (1988). Measuring feelings of alienation in adolescents. *Health Education*, **19**, 36-41.

Finn, J. & Rock, D. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, **82**, 221-234.

Finn, J. (1989). Withdrawing from school. *Review of Educational Research*, **59**, 117-142.

Ford, D., & Lerner, R. (1992). *Developmental systems theory: An integrative approach*. Newbury Park, CA: Sage.

Fromm, E. (1973). *The anatomy of human destructiveness*. New York: Holt Rinehart & Winston.

Gerber, S. (1996). Extracurricular activities and academic achievement. *Journal of Research and Development in Education*, **30**, 42-50.

Goodenow, C. (1993a). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *Journal of Early Adolescence*, **13**, 21-43.

Goodenow, C. (1993b). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*, **30**, 79-90.

Goodenow, C., & Grady, K. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *Journal of Experimental Education*, **62**, 60-71.

Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.

Groat, H., & Neal, A. (1975). Alienation antecedents of unwanted fertility: A longitudinal study. *Social Biology*, **24**, 60-74.

Guertin, W., & Bailey, J. (1970). *Introduction to modern factor analysis*. Ann Arbor, MI: Edwards Brothers.

Haensly, P, Lupkowski, A., & Edlind, E. (1986). The role extracurricular activities in education. *High School Journal*, **82**, 110-119.

Hanks, M. & Eckland, B. (1976). Athletes and social participation in the educational attainment process. *Sociology of Education*, **49**, 271-294.

Harter, S. (1990). Processes underlying adolescent self-concept formulation. In R. Montemayor, G. Adams, and T. Gullotta, *From childhood to adolescence: A transitional period?* (Eds.), Vol. **2**, pp. 205-239. Newbury Park, CA: Sage.

Hawkins, J., & Weis, J. (1985). The social development model: An integrated approach to delinquency prevention. *Journal of Primary Prevention*, **6**, 73-97.

Hawkins, J., Pastor, P., Bell, M., & Morrison, S. (1980). *A typology of cause-focused strategies of delinquency prevention.* National Institute for Juvenile Justice and Delinquency Prevention, Office of Juvenile Justice and Delinquency Prevention. U.S. Department of Justice, Washington, DC: U.S. Government Printing Office.

Hendrix, V., Sederberg, C., & Miller, V. (1990). Correlates of commitment/alienation among high school seniors. *Journal of Research and Development in Education*, **23**, 129-135.

Hershaff, S. (1978). Dropouts: Their general feelings of alienation and attitudes towards school compared to persisters. *Dissertation Abstracts International*, **39**, 2654A.

Hindelang, M. (1973). Causes of delinquency: A partial replication and extension. *Social Problems*, **20**, 471-487.

Hirschi, T. (1969). *Causes of delinquency.* Berkeley: University of California Press.

Holland, A., & Andre, T. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? *Review of Educational Research*, **57**, 4347-466.

Holland, A., & Andre, T. (1988). Beauty is in the eye of the reviewer. *Review of Educational Research*, **58**, 113-118.

Jenkins, J. (1996). The influence of peer affiliation and student activities on adolescent drug involvement. *Adolescence*, **31**, 297-306.

Jenkins, P. (1997). School delinquency and the school social bond. *Journal of Research in Crime and Delinquency*, **34**, 337-367.

Jessor, R., Jessor, S., & Finney (1973). Social psychology of marijuana use: Longitudinal studies of high school and college youth. *Journal of Personality and Social Psychology*, **26**, 1-15.

Johnson, R., Marcos, A., & Bahr, S. (1987). The role of peers in the complex etiology of adolescent drug use. *Criminology*, **25**, 323-340.

Johnston, E. & Faunee, R. (1952). *Student activities in secondary schools*, New York: The Ronald Press Company.

Kagan, D. (1990). How schools alienate students at risk. *Educational Psychologist*, **25**, 105-125.

Keating, D. (1990). Adolescent Thinking. In SS Feldman & GR Elliott (Eds.), *At the threshold: The developing adolescent*, pp. 54-89. Cambridge, MA: Harvard University Press.

Kornhouser, R. (1978). *Social sources of delinquency.* Chicago: University of Chicago Press.

Krohn, M., & Massey, J. (1980). Social control and delinquent behavior: An examination of the elements of social bond. *Sociology Quarterly*, **21**, 529-543.

Krohn, M., Massey, J., Skinner, W., & Lauer, R. (1983). Social bonding theory and adolescent cigarette smoking: A longitudinal analysis. *Journal of Health and Social Behavior*, **24**, 337-349.

Kurango, R. (1979). The concepts of alienation and involvement revisited. *Psychological Bulletin*, **86**, 119-138.

Landers, D., & Landers, D. (1978). Socialization via interscholastic athletics: Its effects on delinquency. *Sociology of Education*, **51**, 299-303.

Landers, D., Feltz, D., Obermeier, G., & Brouse, T. (1978). Socialization via interscholastic athletics: Its affect on delinquency. *Research Quarterly*, **49**, 474-483.

Lejins, P. (1967). The field of prevention. W. Amos & S. Wellford (Eds) *Delinquency prevention: Theory and practice*. Englewood Cliffs, NJ: Prentice Hall.

Lindsay, P. (1984). High school size, participation in activities, and young adult social participation: Some enduring effects of schooling. *Educational Evaluation and Policy Analysis*, **6**, 73-83.

Mahoney, J. & Cairns, R. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology*, **33**, 241-253.

Marcos, A., Bahr, S., & Johnson, R. (1986). Testing of a Bonding/Association theory of adolescent drug use. *Social Forces*, **65**, 135-161.

Marsh, H. (1992). Extracurricular activities: Beneficial extension of the traditional curriculum or subversion of academic goals? *Journal of Educational Psychology*, **84**, 553-562.

Maslow, A. (1962). *Towards a psychology of being*. Princeton, NJ: Van Nostrand.

McClendon, M. (1994). *Multiple regression and causal analysis*. Itaska, IL: F.E. Peacock.

McElroy, M. (1980). School sports socialization: A test of differential effects for disadvantaged youth. *Journal of Sports Psychology*, **2**, 115-123.

McNeal, R. (1995). Extracurricular activities and high school dropouts. *Sociology of Education*, **68**, 62-81.

Miller, F., & colleagues (1956). *Planning students activities*. Englewood Cliffs, NJ: Prentice Hall.

Mount Diablo Unified School District. (1996) *School District Records*. Concord, CA: Mount Diablo Unified School District.

Moyer, T., & Motta, R. (1982). Alienation and school adjustment among black and white adolescents. *The Journal of Psychology*, **112**, 21-28.

National Center for Juvenile Justice, (1994). *Are juveniles driving the violent crime trends*? 6066-27.17, OJJDP, Washington, DC: U.S. Government Printing Office.

Neal, A., & Rettig, S. (1967). On the multidimensionality of alienation. *American Sociological Review*, **32**, 54-64.

Newman, F. (1981). Reducing student alienation in high schools: Implications of theory. *Harvard Educational Review*, **51**, 546-564.

Nover, M. (1981). Student involvement and the psychological experience of the high school. *Education Resources Information Center (ERIC)*, ED210613.

Nutbeam, D., & Aaro, L. (1991). Smoking and pupil attitudes towards school: The implications from health education with young people. *Health Education Research*, **6**, 415-421.

Otto, L. (1975). Extracurricular activities in the educational attainment process. *Rural Sociology*, **40**, 162-176.

Otto, L. (1976). Extracurricular activities and aspirations in the status attainment process. *Rural Sociology*, **41**, 217-233.

Otto, L., & Alwin, D. (1977). Athletics, aspirations, and attainments. *Sociology of Education*, **42**, 102-113.

Parish, E. (1985). Participation in junior high school extracurricular activities and its relationship to academic performance and educational aspirations. *Dissertation Abstracts International*, **46**, 319-320.

Poplin, M. Wheeres, J. (1994). *Voices from the inside: A report on schooling from insider the classroom* (Eds.) Claremeont, CA: Claremont Graduate School

Raymond, J. (1984). An empirical test of alienation on school-aged youth and selected demographic variables and school related perceptions. *Dissertation Abstracts International*, **44**, 2316-2317.

Reid, K. (1981). Alienation and persistent school absenteeism. *Research in Education*, **26**, 31-40.

Richmond, P. (1985). The relationship of grade, sex, ability and socioeconomic status to parent, peer, and school affiliation. *British Journal of Educational Psychology*, **55**, 233-239.

Roderick, M. (1993). *The path to dropping out: Evidence for intervention*. Westport, Conn.: Auburn House.

Rogoff, B. (1990). *Apprenticeship in thinking*. New York: Oxford University Press.

Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A Masten, D. Cicchetti, K. Neuchterlin, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181-214). Cambridge University Press.

Ryan, R., Stiller, J., & Lynch, J. (1990). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *Unpublished manuscript*, University of Rochester.

Schafer, R., & Armer, J. (1972). On scholarship and interscholastic athletics. In E. Dunning, *Sport: Readings from a sociological perspective*, pp. 198-229. Toronto: University of Toronto Press.

Schafer, W. (1969) Participation in interscholastic athletics and delinquency: A preliminary study. *Social Problems*, **17**, 40-47.

Schunk, D. (1989). Self-efficacy and cognitive skills learning. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Vol. **3**, Goals and cognitions*, pp. 13-44. New York: Academic Press.

Seeman, M. (1959). On the meaning of alienation. *American Sociological Review*, **24**, 783-790.

Seeman, M. (1975). Alienation studies. *Annual Review of Sociology*, **1**, 91-123.

Shedler, J., & Block, J. (1990). Adolescent drug use and psychological health. *American Psychologist*, **45**, 612-630.

Shilts, L. (1991). The relationship of early adolescent substance use to extracurricular activities, peer influence, and personal attitudes. *Adolescence*, **26**, 613-617.

Slavin, R. (1990). *Cooperative learning: Theory, research, and practice*. Englewood Cliffs, NJ: Prentice Hall.

Snyder, E. (1969). A longitudinal analysis of the relationship between high school values, social participation, and educational-occupational achievement. *Sociology of Education*, **42**, 261-270.

Snyder, E. (1975). Athletic team involvement, educational plans, and the coach-player relationship. *Adolescence*, **10**, 191-200.

Spady, W. (1970). Lament for the letterman: Effects of peer status and extracurricular activities on goals and achievement. *American Journal of Sociology*, **75**, 680-702.

Steinberg, L., Cider, M., Kaczmarek, N., & Lazzavo, C. (1988). Noninstructional influences on high school students' achievement: The contributions of parents, peers, extracurricular activities, and part-time work. *Education Resources Information Center (ERIC)*, ED307509.

Steinberg, L., Dornbusch, S., & Brown, B. (1992). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, **47**, 723-729.

Thornberry, T. (1987). Towards and integrated theory of delinquency. *Criminology*, **25**, 863-891.

Trusty, J., & Dooley-Dickey, K. (1993). Alienation from school: An exploratory analysis of elementary middle school students' perceptions. *Journal of Research and Development in Education*, **26**, 232-242.

Wehlage, G., Rutter, R., Smith, G., Lesko, N., & Fernandez, R. (1989). *Reducing the risk: Schools as communities of support*. Philadelphia: Falmer.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, **92**, 548-573.

Weis, J., & Hawkins, J. (1981). *Preventing delinquency: The social development approach.* National Institute for Juvenile Justice and Delinquency Prevention, Office of Juvenile Justice and Delinquency Prevention. U.S. Department of Justice, Washington, DC: U.S. Government Printing Office.

Werner, E. & Smith, R. (1992). *Overcoming the odds: High risk children from birth to adulthood*. New York: Cornell University Press.

West County Unified School District. (1996) *School District Records*. Richmond, CA: West County Unified School District.

Appendix A

Summary of Extracurricular Activity Participation Studies

Study	Sample	EAP Measurement	Design	Endogenous Variables	Findings[1]	Rating[2]
Burbach, 1972	*n*=565 Students from one largely European-Am./rural HS.	Not reported	Cross-sectional *T*-test analysis	*Powerlessness* (Measured by items from Dean [1961] and Neal & Rettig [1967]	• Non-office holders had a significantly greater sense of powerlessness as compared to office holders.	*Average*
Cooley et al., 1995	*n*=5,639 JH and HS students from a largely European-Am./middle class population.	Participation measured by a dichotomous variable for each of the categories of activities: *athletics*, *government clubs*, *music drama*, and/or *multiple activities*.	Cross-sectional Chi-squared analysis	Substance use	• Athletes and those students in government were more likely to *experiment* and *use* more socially excepted substances like alcohol and cigarettes while those in many activities used less. • Illicit drugs were experimented with and used less by students involved in any type of extra-curr. activity.	*Average*

[1] The findings reported in this table are ones that are directly relevant to this study. It is possible, though, that other results were found in the listed study. They are not, however, detailed here.
[2] Ratings are based on the totality of the methodological and analytical rigor.

BEST COPY AVAILABLE

Feltz & Weiss, 1984	*n*=487 Female students from 3 different schools. Other info. unreported.	Level of participation measured by number of semesters classified as a participant. Categories: *athlete-service, athlete only, service only,* and *neither.*	Retrospective One-way analysis of covariance	Senior ACT scores	• Activity participants were significantly more likely to have taken the ACT exam. • No significant differences were found between categories of participation when level of involvement and SES were controlled. • Conversely, level of involvement and SES were found to be significant predictors of ACT scores.	*Average*
Fetro, 1987	*n*=644 Sixth through twelfth-graders from a small middle-class city.	An aggregate level of participation was dichotomously measured for 5 categories: *after-school clubs and activities, after-school sports, church groups, community clubs and activities,* and *other activities.*	Cross-sectional Multiple regression and path analysis.	Alienation levels (measured by Fetro, [1985] scale)	• Along with other variables, EAP demonstrated both direct and indirect relationships with alienation. • Only grade level was a more significant predictor than EAP.	*Good*

Gerber, 1996	*n*=10,944 Secondary students from diverse school populations.	Level of participation as measured by a summed checklist of activities. Two categories were used (*school* and *outside of school*).	Longitudinal Multiple regression analysis	Academic achievement (academic tests)	• Participation was related to higher academic achievement. • This relationship was stronger for white students and for school-related activities.	*Good*
Haensly et al., 1986	*n*=508 Seniors from 3 ethnically and SES diverse high schools.	Level of participation as measured by the number of years and the leadership positions held in activities. Activity categories: *all in-school, fine arts, student government, service organizations, communications, athletics,* and *out of school activities.*	Cross-sectional Correlational analysis	Student achievement (grades, honors and awards)	• Participation in any activity type was significantly associated with higher levels of awards and grades.	*Poor*

Hanks & Eckland, 1976	*n*=2,007 Students from several diverse high schools.	Participation level was rated for: *athletic* and *social* (non-athletic) activities.	Longitudinal Multiple regression and path analysis	Academic achievement (educational attainment) and academic performance	• Social activity participation resulted in improved school performance and achievement, even when various other variables were controlled. • Athletic participation had only weak predictive value. • Prosocial, parent, teacher, and peer contact mediated positive impact.	*Good*
Harvanick & Golsan, 1986	*n*=1067 College students.	Participation measured dichotomously for *in-school* and *out of school* activity involvement.	Retrospective Correlation analysis	ACT scores and recalled HS grades	• There was a significant relationship between participation in both of the participation categories and ACT scores and HS grades.	*Poor*
Helm, 1990	*n*=241 Ninth grade students from 7 varied JHs.	Level of participation as measured by a summed checklist of 80 activities.	Cross-sectional Analysis of variance and multiple regressions	Self-concept, attendance, and G.P.A.	• Significant relationships were found between EAP and self-concept, attendance, and G.P.A..	*Average*

Jenkins, 1996	*n*=2,229 HS students from a diverse school district.	Participation measured by a single *yes/no* item.	Cross-sectional; Multiple regressions	Substance use	• Grades and EAP were significantly related to substance use. They were, however, less predictive than peer substance use.	*Average*
Landers & Landers, 1978	*n*=521 Students from 1 high school in a small suburban city.	A dichotomous classification for four categories (*athletes only*, *service only*, *both*, or *neither*), based on HS yearbooks.	Retrospective One-way analysis of variance and Chi-squared tests analysis	Delinquency (court records)	• Those students that participated in any type of activity were significantly less likely to be identified as delinquent. • No difference was found between type of activity.	*Average*
Landers, et al., 1978	*n*=855 HS activity participants from 4 suburban, largely middle class schools.	A dichotomous classification for four categories (*athletes only*, *service only*, or *both*), based on HS yearbooks.	Retrospective *T*-test analysis	Senior SAT scores	• Male athletes fared significantly worse on SAT scores as compared to the national average. • Service-activity participants scored higher than the national average.	*Average*
Lindsay, 1984	*n*=8,952 High school students from varied populations.	A summed level of activity participation (*not at all*, *member*, or *active participant*) for eight activity categories.	Longitudinal Multiple regression and path analysis	Educational attainment (self-report of grades and education attained) and young adult social part.	• EAP participation had direct effects upon social participation. • EAP participation also predicted educational attainment, even after controlling for SES, school size, gender, and sociability.	*Good*

Marsh, 1992	*n*=14,825 High school students from 1,000 schools throughout the U.S..	A summed level of activity involvement (*non-participant*, *participant*, or *leader*) for 16 activities.	Longitudinal Multiple regression analysis	Academic achievement (grades, credits, and honors) prosocial behavior (homework and trouble)	• EAP was a significant predictor of prosocial behavior and educational and occupational achievement, even when controlling for 12 background variables. • Academic self-concept was found to be a significant mediator of EAP impact.	*Good*
McNeal, 1995	*n*=14,249 HS students from a diverse group of 735 schools.	EAP measured by a dichotomous variable for participation in: *academic*, *fine arts*, *athletic*, or *vocational* activities.	Longitudinal Multiple regression	Dropout	• Athletics and fine arts were found to significantly reduce dropout. This relationship was found even when various background variables were controlled.	*Good*
Nover, 1981	*n*=239 Students from one largely European-Am. HS.	Level of participation measured by: the number of activities the student participated in; total participation hours per week; number of offices held; and kind of activity.	Cross-sectional Multiple analysis of variance	Satisfaction with school teachers, peers, and how the school is run; relationships with adults; feeling at the center of school; and grades	• Student activity participation was significantly related to all of the endogenous variables. • This relationship was found even when SES and grade level were considered.	*Good*

Otto & Alwin, 1977	*n*=340 Senior HS students from a non-urban school district.	Level of participation measured by a checklist for a list of activities summed together as a total.	Longitudinal Multiple regression analysis	Educational performance (grades) and achievement (fulfillment of goals and numbers of years completed)	• Perceived peer status was found not to be a significant mediator for EAP's relationship with educational performance and achievement. • Interaction with prosocial peers and parents were found to be significant mediators of EAP impact.	*Good*
Otto, 1975	*n*=340 Senior HS students from a non-urban school district.	Checklist for a list of activities summed together as a total.	Longitudinal Multiple regression analysis	Educational performance (grades) and achievement (fulfillment of goal and numbers of years completed)	• EAP is a significant predictor of educational achievement and performance, even when controlling for academic ability and SES.	*Good*
Otto, 1976	*n*=340 Senior HS students from a non-urban school district.	Checklist for a list of activities summed together as a total.	Longitudinal Multiple regression analysis	Educational performance (grades) and achievement (fulfillment of goal and numbers of years completed)	• School and occupational aspirations do not mediate the impact of EAP upon educational and occupational performance and achievement.	*Good*

Parish, 1984	*n*=501, Junior high students from 7 diverse JHs.	Participation level measured by a summed score from a checklist of many activities.	Cross-sectional Fisher's *Z* analysis	Educational aspirations, and achievement (self-report of grades)	• In general EAP was found to have a slight significant relationship with educational aspirations and achievement. • These relationships varied by SES, ethnicity and IQ. • No relationship between EAP and educational outcomes were found for African Americans.	*Average*
Schafer, 1972	*n*=585 Male, sophomore, athletes from 2 middle-class HSs.	Participation measured by dichotomous classification of athlete or non-athlete.	Retrospective Descriptive tables	Delinquency (court records)	• Athletes are less delinquent than other students. • Only low achieving boys seem to benefit from athletic participation.	*Poor*
Shilts, 1991	*n*=237 JH students. Other info. not reported.	Not detailed.	Cross-sectional Chi-squared analysis	Substance use (self-report)	• Substance users participated in significantly less activities.	*Poor*

Snyder, 1975	*n*=300 Male high school basketball players from appox. 200 HSs.	Level of involvement determined by categories: *substitute*, *starter* or *star*.	Cross-sectional Correlation analysis	Educational aspirations	• Educational aspirations were significantly related to the amount of athletic involvement. • Educational aspirations were also related to encouragement and influence from coaches.	*Poor*
Spady, 1970	*n*= 297 Senior, male students from 2 middle-class HSs.	Participation was measured by a dichotomous classification for four categories (*athletes only*, *service only*, *both*, or *neither*).	Longitudinal Multiple regression analysis	Educational attainment and goal fulfillment	• Participants in non-athletic activities obtain higher levels of attainment, even when controlling for SES, IQ and grades. • Though athletes had a higher level of achievement expectations, these expectations did not mediate achievement outcomes.	*Good*

Appendix B

Summary of Connection Studies

Study	Sample	Connection Measurement	Design	Endogenous Variables	Findings	Rating
Battistich & Hom, 1997	*n*=1,434 Fifth and sixth-graders from throughout the U.S..	Original scale which measured caring and supportive relationships, and student autonomy and influence.	Cross-sectional Multiple regression analysis	Problem behaviors (drug use, delinquency, and school misbehavior)	• School connection was negatively associated with problem behaviors.	*Good*
Calabrese & Adams, 1990	*n*=1,318 Incarcerated and non-incarcerated youth. No other info. reported.	Dean Alienation Scale (1961) which measures *normlessness*, *isolation*, and *powerlessness*.	Cross-sectional *T*-tests	Delinquency (as measured by being jailed)	• Incarcerated youth had significantly higher levels of total alienation, powerlessness, and isolation.	*Poor*
Calabrese & Poe, 1990	*n*=1,064 Secondary students from a diverse, urban school district.	Dean Alienation Scale (1961).	Cross-sectional *T*-tests and analysis of variance	Alienation levels	• African- and Latino-Am. were significantly more isolated. • Males were significantly more isolated than females.	*Average*
Calabrese & Seldin, 1986	*n*=154 Ninth grade students from a working class, European-Am. JH.	Dean Alienation Scale (1961).	Cross-sectional *T*-tests	Alienation levels	• Females had significantly higher levels of powerlessness. • Other components of alienation were higher in females but failed to reach significance.	*Poor*

Elliot & Voss, 1974	*n=2,617 Ninth-grade students from several communities.*	Home, school, and community *normlessness* and *isolation* measured by original scales.	Longitudinal Correlation and multiple regression analysis	School-related delinquency, delinquency, dropout	• School *isolation* was related to delinquency but not predictive of it. • School *normlessness* was related to and predictive of delinquency. • Both school *isolation* and *normlessness* were related to and predictive of school dropout.	*Good*
Goodenow and Grady, 1993	*n*=301 Junior high students from 2 multi-ethnic urban JHs.	School Belonging (as measured by Psychological Sense of School Membership, [Goodenow, 1993b]).	Cross-sectional Correlation analysis	Tardies, grades, attendance, school effort, and expectancies for school success	• School belonging is significantly related to all of these educational correlates.	*Average*
Hendrix, et al., 1990	*n*=1,521 Students from 3 suburban HSs.	School commitment (School importance, relevance, and effort). These constructs were measured by 22 self - statement items.	Cross-sectional Multiple regression analysis	Commitment	• G.P.A. and educational performance variables were significantly related to commitment levels.	*Average*

Hershaff, 1978	*n*=354 Dropout and non-dropouts. No other info. Reported.	Feelings of alienation towards the school, measured by 100 items.	Cross-sectional Discriminate analysis	Dropout	• Those that dropped out were more likely to report being alienated from school.	*Average*
Hirschi, 1969	*n*=1,250 Secondary students from a diverse school district.	Commitment, belief, attachment, and involvement were measured.	Cross-sectional Tabular analysis	Delinquency and prosocial behavior	• All components of Hirschi's social bond were significantly related to delinquency and prosocial behavior.	*Good*
Jenkins, 1997	*n*=754 Middle school students from a suburban-urban community.	Original scale measuring Hirschi's *belief*, *commitment*, *attachment*, and *involvement*.	Cross-sectional Path analysis	School crime, school misconduct, and school non-attendance	• Commitment, attachment and belief had a direct effect upon school misconduct, and school nonattendance. • Commitment and belief had a direct effect upon school crime.	*Good*
Khron et al., 1983	*n*=1,405 Seventh through twelfth graders from a middle class population.	Attachment. commitment and belief using Hirschi's (1969) items.	Longitudinal Multiple regression analysis	Smoking	• Commitment and belief variables were predictive of smoking behaviors and changes in smoking behaviors. • Attachment to peers was also predictive.	*Good*

Moyer & Motta, 1982	*n*=186 Students from 2 diverse high schools.	Dean Alienation Scale (1961) and Heussenstamm's Adolescent Alienation Index (1968).	Cross-sectional Correlations	Grades, absenteeism, and behavioral problems	• Alienation levels were found to be negatively associated with G.P.A., and positively associated with behavioral problems and absents. • These relationships were found even when SES, IQ and sex were partialed out. • After partialling out these factors, only African-Am.s demonstrated a relationship between alienation and behavioral problems.	*Good*
Nutbeam & Aaro, 1991	*n*=4,002 Secondary students from 10 different European countries.	Alienation as measured by three items.	Cross-sectional Chi-squared analysis	Smoking	• Alienation levels were significantly related to smoking behavior.	*Poor*
Reid, 1981	*n*=384 Secondary students from 2 lower/middle class British schools.	Nine items from the Burbach, (1972) scale. These are global alienation items from Dean, (1961) adapted to the school context.	Cross-sectional Analysis of variance and *T*-tests	Attendance	• Absentees had significantly less reported school belonging, and greater reported helplessness, and confusion.	*Poor*

Richmond, 1985	*n*=1,379 Secondary students from Australia.	Fifteen items that tested school, parent, and peer affiliation.	Cross-sectional Factor analysis and Analysis of Variance	Affiliation levels	• There were significant age related declines in school and parent affiliation. • School affiliation was also found to be higher in those students that had higher ability. • Female students were more positive about school and peer affiliation.	*Average*
Trusty & Dooley-Dickey, 1993	*n*=1,636 Fourth through eighth grade students from a diverse school district.	School Affiliation Scale (Stenner & Katzenmeyer, 1993) measuring school belonging and valuing.	Cross-sectional Multiple regression analysis	School affiliation levels	• Alienation levels steadily increase through 7th grade and then level out. • Males reported being less affiliated than females. • African-Am. and lower SES youth had a significantly higher level of school affiliation.	*Good*

BEST COPY AVAILABLE

What do you think?

We want to get your opinion on how things are at this school. This survey is anonymous so no teacher or principal is going to read your survey. We want you to give answers that truly say what is going on at your school.
Thanks for your opinion.

Please mark only one bubble per question. For example, ○ ○ ● ○

❖ These first questions ask whether you agree with the following statements about you and your school.

	Strongly Agree	Agree	Disagree	Strongly Disagree
I am afraid of some places around my school	○	○	●	○
When students have an emergency someone is there to help	○	●	○	○
I feel like I belong at this school	○	●	○	○
I feel safe at this school	○	●	○	○
The principal at this school asks students about their ideas	○	●	○	○
We do not waste time in my classes	○	●	○	○
I can be myself at this school	○	○	●	○
Adults at this school listen to student concerns	○	●	○	○
Adults at this school act on student concerns	○	●	○	○
It pays to follow the rules at my school	○	○	●	○
I have many opportunities to make decisions at my school	○	●	○	○
Students of all racial and ethnic groups are respected at my school	○	●	○	○
I can be a success at this school	○	●	○	○
I can reach my goals through this school	○	○	●	○
The rules at my school are fair	○	●	○	○
I have friends at this school	○	●	○	○
I am comfortable talking with adults at this school about problems	○	●	○	○
My schoolwork helps with things that I do outside of school	○	●	○	○
Teachers let me know I am doing a good job	○	●	○	○
Students here want to learn	○	●	○	○
Both male and female students are treated equally at this school	○	●	○	○

❖ ***This section asks about things that have recently happened to you at school.***
Which of these things happened to you at school in the past month? (We mean things that have actually happened to you, not things you have seen or heard about.

	Yes	No
Punched, kicked, or shoved	○	●
Cut with a knife or something sharp	○	●
Hit on the head or the body by a club, pipe, rock, etc.	○	●
Had personal property stolen	○	●
Had something taken from you by force or threat of force	○	●
Verbally threatened (someone said they would hurt you)	○	●
Sexually harrassed	○	●
Harrassed (messed with) by gang members	○	●
Involved in ethnic or racial conflicts	○	●
Threatened by someone using a gun	○	●

47597

BEST COPY AVAILABLE

Please mark only one bubble per question. For example, ○ ○ ● ○

❖ **During an average week, how many hours do you spend doing these activities?**

	No Hours	1-5 Hours	6-10 Hours	Over 10 Hours
• Playing sports on organized teams like track, softball, baseball, football, basketball, etc.	○	○	○	●
• Participating in outside of school activities like clubs and organizations (for ex., Boy/Girl Scouts, Youth Groups, 4-H, Boys and Girls Clubs, etc)	○	●	○	○
• Participating in school activities and clubs like drama, cheerleading, leadership, student government, etc.	○	●	○	○
• Participating in band, dance, music, or other art activities in or out of school	●	○	○	○
• Working at a job	●	○	○	○

❖ **What grade are you in now?**

6th	7th	8th	9th	10th	11th	12th
○	○	○	○	○	●	○

❖ **Sex**

Male	Female
●	○

❖ **To what racial or ethnic group do you belong?**

Hispanic American	○
African American (black)	○
European American (white)	●
Asian American	○
Native American	○
Pacific Islander American	○
Mixed ethnicity/other	○

❖ **During the last month, how often have you missed a class because you skipped or "cut"?**

Never	●
1-2 times a month	○
3-4 times a month	○
Over 5 times a month	○

❖ **Which of these statements best describes you?**

I am not involved in a gang and do not have friends who are in a gang	●
I have friends in gangs but I am not in a gang	○
I spend some time in a gang	○
I spend much time in a gang	○

❖ **What is the highest grade in school that your mother/stepmother/female guardian has completed? *If you are not sure, make your best guess.***

I do not live with my mother or have a stepmother/female guardian	○
She did not finish high school	○
She finished high school but took no college	○
She took some college or trade school	●
She finished college	○

❖ **What is the highest grade in school that your father/stepfather male guardian has completed? *If you are not sure, make your best guess.***

I do not live with my father or have a stepfather/male guardian	○
He did not finish high school	○
He finished high school but took no college	○
He took some college or trade school	●
He finished college	○

❖ **What mostly are your grades right now?**

A's	B's	C's	D's	F's
●	○	○	○	○

❖ **Do you get free or low cost lunch at school ?**

Yes	No
○	●

❖ **The use of these substances at my school is a problem.**

	Strongly Agree	Agree	Disagree	Strongly Disagree
Tobacco (cigarettes and chewing tobacco)	○	●	○	○
Marijuana (weed)	○	○	●	○
Other drugs (crank, crack, acid, etc.)	○	○	●	○
Alcohol (beer, hard liquor, etc.)	○	○	●	○

47597

BEST COPY AVAILABLE

Please mark only one bubble per question. For example, ○ ○ ● ○

❖ **The use of these substances at my school is a problem.**

	Strongly Agree	Agree	Disagree	Strongly Disagree
Tobacco (cigarettes and chewing tobacco)	○	○	○	○
Marijuana (weed)	○	○	○	○
Other drugs (crank, crack, acid, etc.)	○	○	○	○
Alcohol (beer, hard liquor, etc.)	○	○	○	○

❖ **In a typical class of about 30 students, how many students do you think use the following substances?**

	None	1-5	6-15	16-25	Over 25
Tobacco (cigarettes and chewing tobacco)	○	○	○	○	○
Marijuana (weed)	○	○	○	○	○
Other drugs (crank, crack, acid, etc.)	○	○	○	○	○
Alcohol (beer, hard liquor, etc.)	○	○	○	○	○

❖ **How harmful do you think it is to use the following substances?**

	Not harmful	Maybe harmful	Harmful	Very harmful
Tobacco (cigarettes and chewing tobacco)	○	●	○	○
Marijuana (weed)	○	●	○	○
Other drugs (crank, crack, acid, etc.)	○	●	○	○
Alcohol (beer, hard liquor, etc.)	○	●	○	○

❖ **How often have you used these substances in the last month?**

	Not at all	Once or twice	3-6 times	7 or more times
Cigarettes	○	○	○	○
Chewing tobacco	○	○	○	○
Marijuana	○	○	○	○
Sniffed glue, wite out, paint to get high	○	○	○	○
LSD (acid), Mushrooms (to get high), Ecstacy	○	○	○	○
Methamphetamines (crank,crystal), Cocaine or crack	○	○	○	○
Alcohol (beer, hard liquor, etc.)	○	○	○	○
Steroids	○	○	○	○

❖ **How often do you think your friends have used these substances in the last month?**

	Not at all	Once or twice	3-6 times	7 or more times
Cigarettes	○	○	○	○
Chewing tobacco	○	○	○	○
Marijuana	○	○	○	○
Sniffed glue, wite out, paint to get high	○	○	○	○
LSD (acid), Mushrooms (to get high), Ecstacy	○	○	○	○
Methamphetamines (crank,crystal), Cocaine or crack	○	○	○	○
Alcohol (beer, hard liquor, etc.)	○	○	○	○
Steroids	○	○	○	○

8067

BEST COPY AVAILABLE

Please mark only one bubble per question. For example, ○ ○ ● ○

❖ **The first time that you used these substances was....?**

	Never	Elementary school (k-5th grade)	Middle school (6-8th grade)	High school (9-12th grade)
Tobacco (cigarettes and chewing tobacco)	●	○	○	○
Marijuana (weed)				
Other drugs (crank, crack, acid, etc.)	●	○	○	○
Alcohol (beer, hard liquor, etc.)				

❖ **If you were the principal and wanted to keep kids off alcohol and drugs, what would you do?**

	Very bad idea	Bad idea	Good idea	Very good idea
Have more after school activities	○	○	●	○
Have more drug/alcohol prevention assemblies				
Have drug/alcohol education classes	○	○	●	○
Have peer counselors hanging with students				
Have more police officers (site supervisors) on campus	○	○	●	○
Have more adult counselors on campus				
Have consistent reponse from school staff	○	○	●	○
Have tough punishment for using				
Have open discussions in class	○	●	○	○

❖ **Do you drink alcohol?**
never ●
only at parties ○
whenever ○

❖ **Do you smoke cigarettes?**
never ●
only at parties ○
whenever ○

❖ **Do you smoke marijuana?**
never ●
only at parties ○
whenever ○

❖ **Do you use other drugs (acid, crank, cocaine, etc.)?**
never ●
only at parties ○
whenever ○

❖ **Say your best friend is smoking cigarettes everyday, do you think this is ok?**
not at all ●
possibly ○
yes ○

❖ **Say your best friend is drinking alcohol everyday, do you think this is ok?**
not at all ●
possibly ○
yes ○

❖ **Say your best friend is smoking marijuana everyday, do you think this is ok?**
not at all ●
possibly ○
yes ○

❖ **Say your best friend is using other drugs twice a week, do you think this is ok?**
not at all ●
possibly ○
yes ○

❖ **Do you drink alcohol?**
never ●
only after school ○
whenever ○

❖ **Do you smoke cigarettes?**
never ●
only after school ○
whenever ○

❖ **Do you smoke marijuana?**
never ●
only after school ○
whenever ○

❖ **Do you use other drugs (acid, crank, cocaine, etc.)?**
never ●
only after school ○
whenever ○

8067

BEST COPY AVAILABLE

Appendix D

School Administrator Classroom Selection Instructions

February 23, 1998

To: Coordinators, Safe Schools and Youth Substance Abuse Survey

From: Ken Duckert

RE: SURVEY SCHEDULE AND PLANNING INFORMATION

Thank you for scheduling students to take the Safe School and Substance Abuse Survey. Attached is the schedule of school visits. Please check the grade levels, # students, and times listed for your school to make sure it is correct.
Also attached are parent notification letters to give to students in the selected classes. Please note that parents are requested to let you know by Friday, February 27 if they prefer that their son/daughter not complete the survey.

Here are important ideas to keep in mind as you schedule classes:

- Selected classes should be heterogeneously grouped and be representative of the student body. Group size can be slightly larger or smaller than the posted size.

- Parent notification letters should be given out prior to the scheduled date with enough lead time for parents to respond. You can refer parent questions or concerns to me.

- 1-2 trained persons will be sent to your school to administer the survey. They will check in with you at the scheduled time to get the teacher names and location of selected classes.

- Teachers do not need to make any preparation for the survey. We appreciate their support. They should remain with the class during the survey administration.

- The survey time should be approximately 30 minutes.

I know your schedule is very busy and I appreciate your helping with this project. Please call me if you have any questions.

Thanks!

cc: Myra Redick
Dede Wells

BEST COPY AVAILABLE

Appendix E

Appendix F

Consent forms

Consent to participate in a research study

Mt. Diablo Substance assessment survey

Randy Brown
Department of Human and Community Development
University of California, Davis
(916)754-8436

Dear student:
November 1996

Purpose
You are being asked to participate in an assessment survey. The Mt. Diablo Unified School District wants to find out more information about substance (drugs alcohol, and tobacco) use with its students. We are going to get this information by having students fill out this survey.

Procedure
A researcher from the University of California, Davis will visit your classroom at the beginning of the calendar year. This person will have copies of a survey for each student in the class. You will be invited to complete the survey at this time. If you decide to volunteer, the survey will take about 20 minutes to complete and consists of questions about substance use, frequency of use, first age of use, knowledge of use, attitude of use, and questions about yourself. The survey is completely anonymous, so no one will know who filled out what survey. Teachers or administrators will not see your survey so no one will get in trouble.

Right to refuse or withdraw
You may refuse to participate at any time. You may change your mind about being in the study and quit after the study has started.

Alternatives
If you do not choose to participate you will be given something else to do during this time. Participation is totally voluntary.

Risks
There are no risks for participation in this study only the donation of your time.

Benefits
This survey will give us important information. The school district will use this information to make better substance use programs. So this will help all students, including you.

Participant's Initials _____

APPROVED BY
IRB
Date 11/96

BEST COPY AVAILABLE

Confidentiality
The Mt. Diablo Unified School District wants to find out information about substance use with its students. This information will be used to make better substance use prevention and intervention programs. Absolute confidentiality cannot be guaranteed, since research documents are not protected from subpoena. The confidentiality of the records will be maintained to the fullest extent possible. You will be given a signed and dated copy of this form to keep. You will also be given a copy of the Experimental Subject's Bill of Rights

Compensation
There is no compensation for participation.

Questions
If you have any questions now or after the survey please contact us at:

Randy Brown
Human and Community Development
University of California, Davis
Davis, CA. 95616
(916)754-8436

Thank you for your help on this project.

Sincerely yours,

Your signature below will indicate that you have decided to volunteer as a research subject and that you have read and understand the information provided above, and the bill of rights

_____ (Date) _____ (Signature of Student)

_____ (Date) _____ (Signature of Investigator)

APPROVED AS AMENDED
BY DMUSD IRB, 11/96

11/96

BEST COPY AVAILABLE

Parental Consent to Participate in a Research Study

Mt. Diablo substance assessment survey

Randy Brown
Department of Human and Community Development
University of California, Davis
(916)754-8436

Dear parent:
November 1996

Purpose
Your child is being asked to participate in a substance use assessment survey. The Mt. Diablo Unified School District wants to find out more information about substance (drugs alcohol, and tobacco) use with its students. We are going to get this information by having students fill out this survey.

Procedure
A researcher from the University of California, Davis will visit your child's classroom at the beginning of the calendar year. This person will have copies of a survey for each student in the class. You child will be invited to complete the survey at this time. If you decide to let your child volunteer, the survey will take about 20 minutes to complete and consists of questions about substance use, frequency of use, first age of use, knowledge of use, attitude of use, and questions about themselves. The survey is completely anonymous, so no one will know who filled out what survey. Teachers or administrators will not see your child survey and no one will get in trouble from this information.

Right to refuse or withdraw
You or your child may refuse to participate at any time. Your child may change his/her mind about being in the study and quit after the study has started.

Alternatives
If your child does not participate they will be given something else to do during this time. Participation is totally voluntary.

Risks
There are no risks for participation in this study only the donation of your child's time.

Benefits
This survey will give us important information. The school district will use this information to make better substance use programs. So this will help all students, including your child.

Parent's Initials _____

11/96

BEST COPY AVAILABLE

Confidentiality
The Mt. Diablo Unified School District wants to find out information about substance use with its students. This information will be used to make better substance use prevention and intervention programs. Absolute confidentiality cannot be guaranteed, since research documents are not protected from subpoena. The confidentiality of the records will be maintained to the fullest extent possible. You will be given a signed and dated copy of this form to keep. You will also be given a copy of the Experimental Subject's Bill of Rights.

Compensation
There is no compensation for participation.

Questions
If you have any questions now or after the survey please contact us at:

Randy Brown
Human and Community Development
University of California, Davis
Davis, CA. 95616
(916)754-8436

Thank you for your help on this project.

Sincerely yours,

****

Your signature below will indicate that you have decided to let your child volunteer as a research subject and that you have read and understand the information provided above, and the bill of rights.

(Date) (Signature of Legal Representative)

(Date) (Signature of Investigator)

11/96

BEST COPY AVAILABLE

Appendix F

The script below is a loose example of what needs to be said prior to administration of the survey. You don't need to say it exactly this way but just make sure these points are covered.

Survey administration Script

Hi my name is _____ and I am from _____.
We are helping this school district find out what is going on with you the students. Students need to be heard. This survey is going to help the school district to make this a better place for you students. We are interested in hearing your opinion. Only 1-3 classes in your school have been chosen to fill this survey out, so your opinion is very important to us.
This survey is anonymous so no one is going to know who filled out what survey. So please don't put your name on the survey. Remember neither your teacher nor your principal are going to read these surveys. So be as truthful as possible. This is not a test, there is not right or wrong answer. The only right answer is your opinion.
I am going to hand out these surveys, if there is something that you don't understand then please raise your hand and I'll come around and help. If you finish while others are still working on the survey, you may read or do other work. Please avoid disturbing those still completing the survey.

To the Administrator

If a question is asked go around and assist the student as best as possible while not directly telling them what to answer. If a student is slow in completing the survey they might be having difficulty. If there is reading or comprehension difficulty, you might need to read some questions to individual students. Sometimes a translation from you or another student may be needed to complete the survey. Also make sure that students are not sharing answers. Also make sure that students have stuff to do when they are finished so as not to disturb the other students.

Appendix G

Focus Group Script (West Contra Costa Unified)

Hi , we are _____ and _____ and we are here to talk with you about your opinions of this school. Our discussions here are to help us make up a survey to give to all students in this school district. So, we really need your opinions on these issues. You are here as representatives of your peer groups, your groups of friends. The way this is going to work is we are going to bring up issues and then we are going to talk about them. Everyone should be respectful when other people are talking so only one person talking at a time. We want to hear from everybody because each of your opinions is important to us. This discussion is protected so we are not going to go out and tell your teachers or the principal, "Oh, Jonnie said this". So we want you to feel free to say whatever, knowing we are not going to get you in trouble. So thanks ahead of time.

The first issue we want to talk about is (something that will encourage opinions from everybody):

Potential 1st questions

How good a job does this school do at making students feel connected to it?
What things make you feel like a part of this school?
What kinds of groups are there here at this school?
What kinds of crime and safety things happen at this school?

Potential 2nd questions

What kinds of substance use are going on at your school?
Do think substance use is a problem at your school?

Optional 3rd questions

What kinds of things make students feel unsafe at this school?
How effective have the substance prevention and intervention efforts been?

Final Question

What kinds of things can help keep use off substances?
What kinds of things can the school do to make students safer and using fewer substances?

Appendix H

	Sports	Outside act.	Inside act.	Fine arts	TEAP	Belong	Comitt	Belief	S.Con	Alcohol Use	Tobacco Use	Marij. Use	Other sub use	Total sub use
Sports														
Outside act.	.142**													
Inside act.	.061*	.302**												
Fine arts	.080*	.264**	.335**											
TEAP	.576**	.623**	.605**	.658**										
Belong	.100**	.086**	.004	.022	.089**									
Commit	.087**	.028	.013	.028	.075**	.275**								
Belief	.013	.009	.052	.045	.055*	.315**	.427**							
S.con	.065**	.027	.042	.045	.077**	.581**	.721**	.887**						
Alcohol use	-.059*	-.078**	-.067**	-.107**	-.127**	-.127**	-.250**	-.298**	-.300**					
Tobacco use	-.123**	-.123**	-.039	-.053*	-.130**	-.083**	-.168**	-.198**	-.200**	.549**				
Marij. Use	-.084**	-.070**	-.038	-.078**	-.123**	-.152**	-.239**	-.258**	-.272**	.637**	.529**			
Other sub use	-.066**	-.033	-.002	-.013	-.046	-.179**	-.156**	-.247**	-.244**	.332**	.333**	.437**		
Total sub use	-.106**	-.089**	-.050*	-.085**	-.137**	-.160**	-.261**	-.313**	-.318**	.840**	.811**	.845**	.580**	

BEST COPY AVAILABLE

Appendix I

Table 20. *Results from multiple regression equations predicting problem behaviors from Belonging after controlling background variables.*

	Alcohol	Tobacco	Marij.	Other Drugs	Total Sub. Use	Class Cutting
Belong. (B)	-.097***	-.066*	-.106***	-.176***	-.128***	-.046
Grade (B)	.252***	.193***	.227***	.067***	.251***	.410***
SES (B)	-.018	.004	-.014	-.031	-.015	-.054*
Sex (B)	-.012	.028	-.053*	.016	-.007	-.014
Afr. (B)	-.039	-.127***	-.037	-.096**	-.070*	-.032
Asian (B)	-.104***	-.033	-.088**	-.048	-.088**	-.039
Hisp. (B)	.072***	.020	.037	-.008	.045	.012
Other (B)	-.014	.029	-.017	-.045	-.009	.011
Adj. R^2	.101	.050	.090	.040	.098	.178

*p<.05; ** p<.005; *** p<.000.*
Note: *Sex is coded Male=0; Female=1. Ethnicity is coded Not of the ethnicity=0; Of the ethnicity=1. For example, non-Hispanic=0; Hispanic=1.*

BEST COPY AVAILABLE

Appendix J

Although extracurricular activity participation and *school connection* were the foci of this study, relationships between sociodemographic variables, and *school connection* and problem behaviors are worth discussing. For example, older students were more likely to report committing problem behaviors; correspondingly, older students reported being less connected to school. Other studies have also found that a student's sense of *school connection* seems to decline over time (Richmond, 1984; Calabrese, 1987; Trusty & Dooley-Dickey, 1993). Some authors have argued that, while students' needs for autonomy and connection increase, the school environment ostensibly does not facilitate the fulfillment of these developmental needs (Eccles et al., 1996).

This study also found that Asian-American students reported using alcohol and marijuana less than other students did. Asian-American students also reported being significantly more connected to school. No other consistent ethnic differences were uncovered in these analyses. Although some authors have suggested that people of color are more likely to feel alienated from school (Calabrese & Poe, 1990), this study did not find this

distinction. Moreover, it seems as if Asian-American youth as a group are more aligned with school. Researchers have suggested that Asian-American youth are often encouraged by both parent and peers to maintain positive attitudes towards school (Steinberg, Dornbusch & Brown, 1992).

Females also reported feeling more connected to school than male students. Other studies have also found that females have a higher sense of connection (Richmond, 1985; Calabrese & Poe, 1990; Hendrix et al., 1990; Trusty & Doole-Dickey, 1993). Authors have explained that female students, in general, might have values which are more consistent with school institutional values (Trusty & Dooley-Dickey, 1993).

This study seemed to confirm that which other authors have suggested: a greater effort should be directed towards activities and programs which engage older male students (Calabrese, 1987; Hendrix et al., 1990; Newman, 1981; Finn, 1989). Unfortunately, these students are often not attracted to conventional programming (Carnegie, 1995). Innovative and engaging efforts need to be developed to reach out to these students and counter their feelings of disconnection.